

January 27, 1999

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Distribution

QUARTERLY ENVIRONMENTAL MONITORING EXCHANGE OF INFORMATION MEETING –
SMN-017-99

The next Quarterly Environmental Monitoring Exchange of Information Meeting will be held on Tuesday, February 23, 1999 at 1:30 PM at the Broomfield Recreation/Seniors Center, 280 Lamar St., Broomfield. Please check the agenda board at the Senior Center upon arrival for the exact room location. Data for fourth quarter 1998 (October, November, and December) will be presented. Included with this notice are quarterly reports from the third quarter 1998 (July, August, and September) for the Site.

The Colorado Department of Public Health and Environment (CDPHE) is currently producing the agenda for this meeting. Please contact Deb Shaw, CDPHE, at 303-692-3421 for any questions concerning the agenda.

If you have any questions, please contact Steve Nesta at 303-966-6386.

Sincerely,

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ADMIN RECORD

SW-SW-A-03060



**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
QUARTERLY
ENVIRONMENTAL MONITORING REPORT
JULY – SEPTEMBER 1998**



Rocky Flats Environmental Technology Site
P.O. Box 464, Golden, CO 80402-0464

NOVEMBER 1998
RF/RMRS-98287.UN

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**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
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PREPARED BY ROCKY MOUNTAIN REMEDIATION SERVICES, L.L.C.

**NOVEMBER 1998
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Quarterly Environmental Monitoring Report: July – September 1998*

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HIGHLIGHTS FOR JULY, AUGUST, AND SEPTEMBER 1998

This report is produced and distributed quarterly as part of our ongoing Agreement in Principle and as a forum for the Rocky Flats Cleanup Agreement (RFCA) quarterly monitoring requirement. Additional information about quarterly reporting will be formalized after completion of the Integrated Monitoring Plans (IMP0 for the various media sampled.

Airborne Effluent

Complete isotopic analytical data for January through August 1998 are included in this report. Data for September 1998 are not complete at this time. All data are within the normally observed ranges of concentrations for their respective locations.

Due to data entry errors during generation of the April - June 1998 Quarterly Environmental Monitoring Report, some of the summary effluent data reported were in error. The data contained in this report are correct.

Consistent with all other uses of these data, positive values only are included in the total release calculation (the negative values are treated as zeros). The uncertainty (error) calculation does reflect all values.

Ambient Air

Complete isotopic analytical data for January through August 1998 for coarse (> 10 micrometers) and fine (<10 micrometers) particles are included in this report. Data for September 1998 are not complete at this time. All data are within the normally observed ranges of concentrations for their respective locations.

Some additional uncertainties exist in the data for samplers S-132 and S-209, which are not accounted for in the reported error values. Reasons for the uncertainties are:

- A malfunction in the hour meter (used to establish filter exposure time) was realized at sampler S-132 for the months of June and July. The meter was replaced in July. Run times have been estimated based on continuous operation between filter changes, instead of elapsed time meter readings. The uncertainty in the total run time is less than five hours out of 672 hours for June and 984 hours for July.
- It is believed that the hour meter value recorded on the July filter change field log sheets had two transposed numbers for sampler S-209. This error is not believed to impact the uncertainty in the volume calculations for June and July.

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Due to data entry errors during generation of the April – June 1998 Quarterly Environmental Monitoring Report, some of the data were reported in error. The data contained in this report are correct.

Meteorology and Climatology

Meteorological data are routinely measured from instrumentation on a 61-meter tower located in the west buffer zone at an elevation of 1,870 meters (6,140 feet) above sea level. All meteorological data are being collected on a real-time basis and are loaded into the Computer Assisted Protective Action Recommendations System (CAPARS) model for emergency response purposes.

Climatic summaries and Windroses for June 1998 through September 1998 are included in this report.

As a result of the new protocols used to validate the meteorological data, each 15 minute-averaged observation is validated, rather than the entire observation record for the same time period (which might contain 70 different observations-i.e. temperature, wind speed, etc.). Therefore, missing data will be reported with respect to the wind speed and wind direction values, for example, rather than recording all observations missing for the same 15 minute period. Wind speed/direction data from the following times are missing due to maintenance, equipment failure, or calibrations:

June 1, from 0000 to 0015

July 1, from 0000 to 0015

August 1, from 0000 to 0015

August 5, from 0000 to 0015

August 10, from 0900 to 1600

September 1, from 0000 to 0015

September 22, from 0830 to 1100

Surface Water

Surface water analytical data collected during fourth quarter of FY 98 (July, August, and September) for NPDES/FFCA permit compliance are presented in this report. All reported data are consistant with historical measurements and within permit limitations, with the exception of the information included below.

The Site reported an exceedance of the daily maximum of 12 mg/l for Total Phosphorus as P at the Sewage Treatment Plant effluent during the month of September 1998. The analytical result of 14 mg/l was measured from a composite sample collected September 1, 1998. An investigation of possible causes

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continues, but to date no direct cause has been identified. Subsequent Total Phosphorus analyses showed no further elevated results for the remainder of September, and the monthly average was below the limitation of 8 mg/l.

Hydrologic Monitoring and Rocky Flats Cleanup Agreement (RFCA) Monitoring

Analytical data for July, August, and September 1998 from samples collected for RFCA and Hydrologic Monitoring are included in this report.

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1. AIR DATA

1.1 EFFLUENT AIR DATA

Table 1-1. Plutonium and Americium Airborne Effluent Data

Month	Pu 239 Release (uCi)	Pu 239 Release Error (\pm) (uCi)	Pu 239 C Maximum (pCi/m ³)	Pu 239 C Maximum Error (\pm) (pCi/m ³)	Am 241 Release (uCi)	Am 241 Release Error (\pm) (uCi)	Am 241 C Maximum (pCi/m ³)	Am 241 C Maximum Error (\pm) (pCi/m ³)
					CY 1997			
Jan. – Dec.	0.1735	0.0456	0.0008	0.0001	0.0144	0.0406	0.0007	0.0000
					CY 1998			
January	0.0220	0.0044	0.00042	0.00009	0.0053	0.0021	0.00006	0.00001
February	0.0013	0.0014	0.00002	0.00002	0.0008	0.0056	0.00001	0.00004
March	0.0074	0.0015	0.00020	0.00002	0.0013	0.0019	0.00001	0.00001
April	0.0054	0.0058	0.00002	0.00003	0.0028	0.0087	0.00005	0.00012
May	0.0031	0.0028	0.00008	0.00006	0.0073	0.0065	0.00003	0.00005
June	0.0036	0.0628	0.00004	0.00004	0.0026	0.0104	0.00003	0.00004
July	0.0040	0.0279	0.00004	0.00004	0.0011	0.0095	0.00005	0.00005
August	0.0019	0.0374	0.00003	0.00002	0.0020	0.0140	0.00004	0.00005
September	a	a	a	a	a	a	a	a
October								
November								
December								
Year to Date	0.0488	0.0786	0.00042	0.00009	0.0233	0.0235	0.00006	0.00001

a Incomplete laboratory analysis

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Table 1-2. Uranium Airborne Effluent Data

Month	U-233/234 Release (uCi)	U-233/234 Release Error (±) (uCi)	U-233/234 C Maximum (pCi/m ³)	U-233/234 C Maximum Error (±) (pCi/m ³)	U-238 Release (uCi)	U-238 Release Error (±) (uCi)	U-238 C Maximum (pCi/m ³)	U-238 C Maximum Error (±) (pCi/m ³)
CY 1997								
Jan. – Dec.	-0.1525	0.1361	0.0007	0.0004	-0.1376	0.1406	0.0005	0.0002
CY 1998								
January	0.0151	0.0056	0.00012	0.00007	0.0180	0.0055	0.00013	0.00007
February	0.0193	0.0116	0.00013	0.00009	0.0256	0.0121	0.00020	0.00012
March	0.0037	0.0041	0.00003	0.00002	0.0045	0.0041	0.00003	0.00002
April	0.0009	0.0094	0.00002	0.00006	0.0032	0.0107	0.00007	0.00007
May	0.0009	0.0101	0.00005	0.00008	0.0010	0.0095	0.00004	0.00006
June	0.0178	0.0149	0.00031	0.00019	0.0153	0.0152	0.00035	0.00020
July	0.0041	0.0098	0.00006	0.00008	0.0019	0.0112	0.00009	0.00008
August	0.0026	0.0101	0.00003	0.00005	0.0027	0.0131	0.00003	0.00010
September	a	a	a	a	a	a	a	a
October								
November								
December								
Year to Date	0.0645	0.0282	0.00031	0.00019	0.0721	0.0304	0.00035	0.00020

a Incomplete laboratory analysis

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Table 1-3. Uranium 235 and Tritium Airborne Effluent Data

Month	U-235 Release (μCi)	U-235 Release Error (\pm) (μCi)	U-235 C Maximum (pCi/m^3)	U-235 C Maximum Error (\pm) (pCi/m^3)	Tritium Release (μCi)	Tritium Release Error (\pm) (μCi)	Tritium C Maximum (pCi/m^3)	Tritium C Maximum Error (\pm) (pCi/m^3)
				CY 1997				
Jan. – Dec.	0.0022	0.0324	0.0001	0.0002	53.132		12.59	0.37
				CY 1998				
January	0.0026	0.0022	0.00001	0.00001	3.4597	0.7472	0.3437	0.0914
February	0.0021	0.0034	0.00002	0.00003	2.7001	0.7315	0.3207	0.0931
March	0.0011	0.0014	0.00001	0.00001	3.6149	0.8004	0.3311	0.1015
April	0.0004	0.0021	0.00001	0.00002	2.2414	0.7969	0.3156	0.0993
May	0.0021	0.0036	0.00001	0.00002	3.9793	0.7440	0.4885	0.1098
June	0.0032	0.0041	0.00005	0.00006	2.6167	0.7321	0.3936	0.1018
July	0.0016	0.0031	0.00002	0.00003	3.8219	0.6602	0.5058	0.2013
August	0.0010	0.0026	0.00002	0.00002	4.5852	0.7207	0.4221	0.1055
September	a	a	a	a	2.8154	0.6772	0.4163	0.1086
October								
November								
December								
Year to Date	0.0142	0.0083	0.00005	0.00006	27.0193	0.7321	0.5058	0.2013

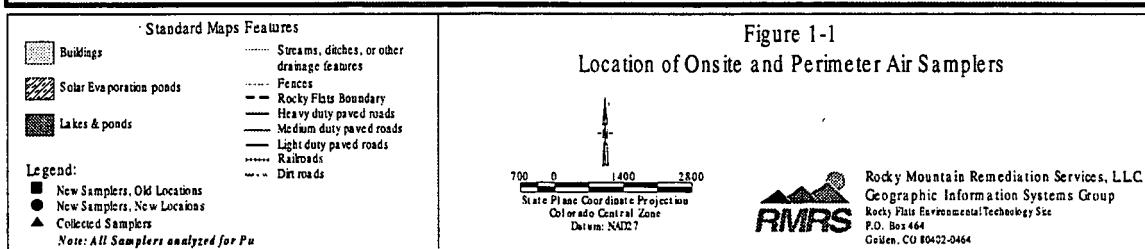
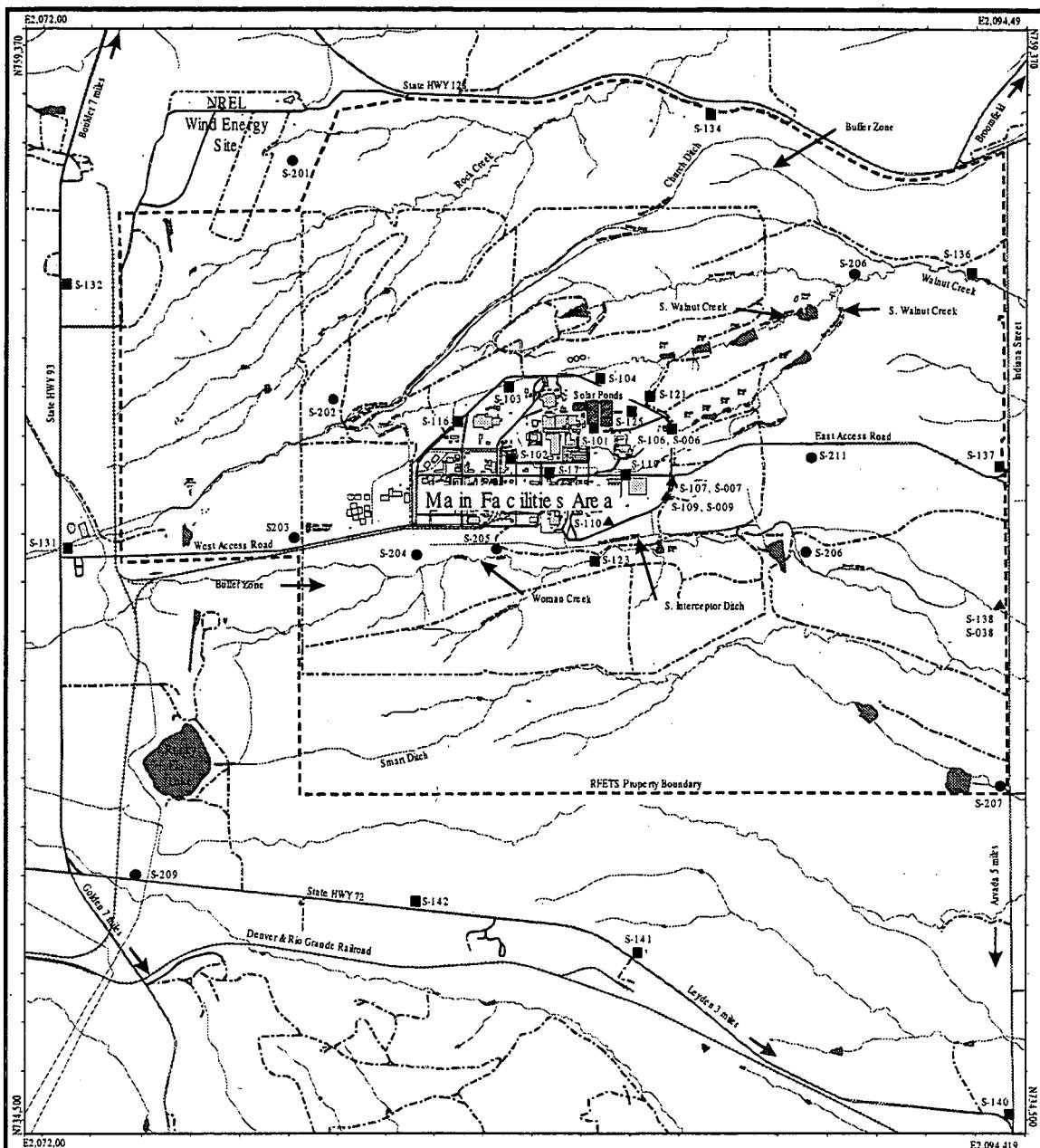
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Map 1-1. Location of Onsite and Perimeter Air Samplers



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1.2 AMBIENT AIR DATA

Table 1-4. Plutonium 239 Concentrations in Ambient Air for Onsite Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc. (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc. (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc. (pCi/m ³)	Total Error (±) (pCi/m ³)
S-107	01/20/98	01/20/98	24173	0.0000092	0.0000037	0.0007167	0.0002271	0.0007259	0.0002271
S-107	02/04/98	02/04/98	47545	0.0000170	0.0000044	0.0000231	0.0000079	0.0000401	0.0000091
S-107	03/05/98	03/05/98	55150	0.0000094	0.0000026	0.0000167	0.0000060	0.0000261	0.0000065
S-107	04/08/98	04/08/98	47266	0.0000092	0.0000026	0.0000228	0.0000074	0.0000321	0.0000079
S-107	05/07/98	05/07/98	36087	0.0000073	0.0000026	0.0000443	0.0000140	0.0000516	0.0000142
S-107	05/29/98	05/29/98	45656	0.0000094	0.0000026	0.0000160	0.0000059	0.0000254	0.0000064
S-107	06/26/98	06/26/98	45642	0.0000265	0.0000047	0.0000199	0.0000070	0.0000464	0.0000084
S-107	07/24/98	07/24/98	68320	0.0000119	0.0000025	0.0000079	0.0000054	0.0000198	0.0000060
S-007	01/20/98	01/20/98	18884	N/A	N/A	N/A	N/A	0.0000199	0.0000060
S-007	02/04/98	02/04/98	37012	N/A	N/A	N/A	N/A	0.0000396	0.0000070
S-007	03/05/98	03/05/98	42369	N/A	N/A	N/A	N/A	0.0000218	0.0000058
S-007	04/08/98	04/08/98	34915	N/A	N/A	N/A	N/A	0.0000286	0.0000057
S-007	05/07/98	05/07/98	31639	N/A	N/A	N/A	N/A	0.0000563	0.0000091
S-007	06/03/98	06/03/98	33615	N/A	N/A	N/A	N/A	0.0000216	0.0000053
S-007	07/01/98	07/01/98	41348	N/A	N/A	N/A	N/A	0.0000430	0.0000064

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-5. Plutonium 239 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (\pm) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (\pm) (pCi/m3)	Total Conc (pCi/m3)	Total Error (\pm) (pCi/m3)
S-131	01/21/98	02/05/98	24269	0.0000001	0.0000022	-0.0000001	0.0000002	0.0000000	0.0000022
S-131	02/05/98	03/10/98	53987	0.0000048	0.0000020	0.0000000	0.0000001	0.0000048	0.0000020
S-131	03/10/98	04/09/98	48890	0.0000057	0.0000022	-0.0000002	0.0000002	0.0000055	0.0000022
S-131	04/09/98	05/06/98	43841	0.0000008	0.0000011	0.0000020	0.0000019	0.0000028	0.0000022
S-131	05/06/98	06/04/98	47552	0.0000007	0.0000009	0.0000003	0.0000012	0.0000009	0.0000015
S-131	06/04/98	07/02/98	45424	-0.0000004	0.0000006	0.0000021	0.0000016	0.0000018	0.0000017
S-131	07/02/98	08/12/98	66893	0.0000001	0.0000004	-0.0000002	0.0000003	-0.0000001	0.0000005
S-131	08/12/98	09/03/98	35652	0.0000003	0.0000009	0.0000007	0.0000011	0.0000010	0.0000014
S-132	01/21/98	02/05/98	24275	0.0000022	0.0000021	0.0000006	0.0000024	0.0000027	0.0000032
S-132	02/05/98	03/10/98	53824	0.0000053	0.0000022	-0.0000002	0.0000003	0.0000051	0.0000022
S-132	03/10/98	04/09/98	38758	0.0000073	0.0000029	-0.0000002	0.0000003	0.0000071	0.0000029
S-132	04/09/98	05/06/98	41863	0.0000007	0.0000008	0.0000010	0.0000013	0.0000017	0.0000016
S-132	05/06/98	06/04/98	47300	0.0000002	0.0000006	0.0000005	0.0000010	0.0000007	0.0000011
S-132	06/04/98	07/02/98	45669	0.0000001	0.0000007	0.0000000	0.0000001	0.0000001	0.0000007
S-132	07/02/98	08/12/98	66873	0.0000004	0.0000006	0.0000008	0.0000009	0.0000012	0.0000011
S-132	08/12/98	09/03/98	35883	0.0000007	0.0000010	0.0000002	0.0000010	0.0000010	0.0000014
S-134	01/21/98	02/05/98	22862	0.0000012	0.0000017	-0.0000006	0.0000011	0.0000006	0.0000020
S-134	02/05/98	03/10/98	55143	0.0000056	0.0000022	0.0000003	0.0000007	0.0000059	0.0000023
S-134	03/10/98	04/09/98	48890	0.0000029	0.0000016	-0.0000001	0.0000001	0.0000028	0.0000016
S-134	04/09/98	05/06/98	43698	0.0000011	0.0000010	0.0000010	0.0000013	0.0000021	0.0000016
S-134	05/06/98	06/04/98	47558	0.0000005	0.0000009	0.0000019	0.0000015	0.0000024	0.0000018
S-134	06/04/98	07/02/98	45574	-0.0000002	0.0000004	0.0000000	0.0000008	-0.0000002	0.0000009
S-134	07/02/98	08/12/98	66934	0.0000001	0.0000003	0.0000001	0.0000004	0.0000003	0.0000005
S-134	08/12/98	09/03/98	35570	-0.0000002	0.0000004	0.0000008	0.0000012	0.0000006	0.0000013
S-136	01/21/98	02/05/98	23120	0.0000004	0.0000014	-0.0000001	0.0000002	0.0000003	0.0000014
S-136	02/05/98	03/10/98	54878	0.0000032	0.0000019	0.0000004	0.0000007	0.0000036	0.0000021
S-136	03/10/98	04/09/98	48843	0.0000029	0.0000016	0.0000000	0.0000006	0.0000028	0.0000017
S-136	04/09/98	05/06/98	44154	0.0000002	0.0000010	0.0000025	0.0000018	0.0000027	0.0000020
S-136	05/06/98	06/04/98	47565	-0.0000002	0.0000007	0.0000007	0.0000011	0.0000006	0.0000013
S-136	06/04/98	07/02/98	45608	0.0000001	0.0000005	0.0000001	0.0000006	0.0000002	0.0000008
S-136	07/02/98	08/12/98	66907	-0.0000001	0.0000001	0.0000004	0.0000007	0.0000003	0.0000008
S-136	08/12/98	09/03/98	35455	-0.0000002	0.0000007	0.0000000	0.0000001	-0.0000003	0.0000007
S-137	01/21/98	02/05/98	23140	0.0000004	0.0000016	0.0000011	0.0000023	0.0000014	0.0000028
S-137	02/05/98	03/10/98	54878	0.0000062	0.0000024	0.0000002	0.0000008	0.0000064	0.0000026
S-137	03/10/98	04/09/98	48843	0.0000094	0.0000032	0.0000004	0.0000008	0.0000097	0.0000033
S-137	04/09/98	05/06/98	44160	0.0000004	0.0000010	0.0000010	0.0000013	0.0000014	0.0000016
S-137	05/06/98	06/04/98	47558	0.0000003	0.0000007	0.0000008	0.0000014	0.0000011	0.0000016
S-137	06/04/98	07/02/98	45622	0.0000021	0.0000013	0.0000007	0.0000011	0.0000029	0.0000017
S-137	07/02/98	08/12/98	66900	0.0000001	0.0000004	0.0000003	0.0000005	0.0000003	0.0000007
S-137	08/12/98	09/03/98	35584	-0.0000003	0.0000015	0.0000017	0.0000020	0.0000014	0.0000025

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Table 1-5 (continued). Plutonium 239 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-138	01/21/98	02/05/98	23059	0.0000000	0.0000014	-0.0000001	0.0000002	0.0000000	0.0000014
S-138	02/05/98	03/10/98	50984	0.0000082	0.0000028	0.0000001	0.0000006	0.0000083	0.0000029
S-138	03/10/98	04/09/98	44487	0.0000062	0.0000025	-0.0000001	0.0000001	0.0000061	0.0000025
S-138	04/09/98	05/06/98	34768	0.0000010	0.0000011	0.0000004	0.0000012	0.0000014	0.0000016
S-138	05/06/98	06/04/98	46573	0.0000007	0.0000011	0.0000002	0.0000027	0.0000009	0.0000030
S-138	06/04/98	07/02/98	45282	0.0000008	0.0000011	-0.0000003	0.0000004	0.0000005	0.0000012
S-138	07/02/98	08/12/98	67056	0.0000001	0.0000004	0.0000000	0.0000005	0.0000001	0.0000006
S-138	08/12/98	09/03/98	35652	0.0000009	0.0000015	0.0000004	0.0000012	0.0000013	0.0000019
S-140	01/21/98	02/05/98	22970	0.0000024	0.0000017	-0.0000001	0.0000002	0.0000024	0.0000018
S-140	02/05/98	03/10/98	55109	0.0000081	0.0000031	0.0000005	0.0000008	0.0000086	0.0000032
S-140	03/10/98	04/09/98	48843	0.0000051	0.0000023	0.0000008	0.0000012	0.0000059	0.0000026
S-140	04/09/98	05/06/98	44065	0.0000000	0.0000007	0.0000007	0.0000009	0.0000008	0.0000011
S-140	05/06/98	06/04/98	47538	-0.0000002	0.0000005	0.0000006	0.0000009	0.0000005	0.0000010
S-140	06/04/98	07/02/98	45445	0.0000002	0.0000008	0.0000005	0.0000011	0.0000007	0.0000013
S-140	07/02/98	08/12/98	67015	-0.0000001	0.0000005	0.0000000	0.0000005	-0.0000001	0.0000007
S-140	08/12/98	09/03/98	35645	0.0000000	0.0000008	0.0000000	0.0000001	0.0000000	0.0000008
S-141	01/21/98	02/05/98	22964	0.0000013	0.0000023	0.0000005	0.0000021	0.0000017	0.0000031
S-141	02/05/98	03/10/98	55122	0.0000042	0.0000016	0.0000000	0.0000005	0.0000042	0.0000017
S-141	03/10/98	04/09/98	48843	0.0000098	0.0000033	-0.0000002	0.0000002	0.0000096	0.0000034
S-141	04/09/98	05/06/98	44065	-0.0000002	0.0000007	0.0000010	0.0000012	0.0000008	0.0000014
S-141	05/06/98	06/04/98	47538	-0.0000002	0.0000001	0.0000002	0.0000010	0.0000001	0.0000010
S-141	06/04/98	07/02/98	45458	0.0000005	0.0000007	0.0000006	0.0000010	0.0000011	0.0000012
S-141	07/02/98	08/12/98	67002	0.0000001	0.0000004	-0.0000002	0.0000003	-0.0000001	0.0000005
S-141	08/12/98	09/03/98	35645	0.0000004	0.0000007	0.0000004	0.0000008	0.0000008	0.0000011
S-142	01/21/98	02/05/98	22970	0.0000011	0.0000014	0.0000012	0.0000025	0.0000023	0.0000029
S-142	02/05/98	03/10/98	55122	0.0000022	0.0000013	0.0000001	0.0000007	0.0000024	0.0000015
S-142	03/10/98	04/09/98	48843	0.0000048	0.0000023	-0.0000002	0.0000002	0.0000046	0.0000023
S-142	04/09/98	05/06/98	44058	-0.0000002	0.0000008	0.0000003	0.0000006	0.0000000	0.0000010
S-142	05/06/98	06/04/98	47552	0.0000004	0.0000009	-0.0000003	0.0000004	0.0000001	0.0000009
S-142	06/04/98	07/02/98	45465	-0.0000002	0.0000004	0.0000000	0.0000008	-0.0000002	0.0000009
S-142	07/02/98	08/12/98	66961	0.0000002	0.0000003	0.0000004	0.0000008	0.0000007	0.0000008
S-142	08/12/98	09/03/98	35611	0.0000001	0.0000009	0.0000000	0.0000001	0.0000001	0.0000009
S-201	01/21/98	02/05/98	22882	0.0000016	0.0000015	0.0000003	0.0000014	0.0000018	0.0000021
S-201	02/05/98	03/10/98	55204	0.0000061	0.0000026	0.0000002	0.0000005	0.0000063	0.0000026
S-201	03/10/98	04/09/98	48890	0.0000054	0.0000022	0.0000009	0.0000012	0.0000063	0.0000025
S-201	04/09/98	05/06/98	42692	0.0000006	0.0000006	-0.0000003	0.0000004	0.0000003	0.0000008
S-201	05/06/98	06/04/98	47558	-0.0000001	0.0000007	0.0000011	0.0000011	0.0000010	0.0000013
S-201	06/04/98	07/02/98	40355	0.0000000	0.0000008	-0.0000002	0.0000011	-0.0000001	0.0000014
S-201	07/02/98	08/12/98	65969	-0.0000001	0.0000002	0.0000003	0.0000007	0.0000003	0.0000007
S-201	08/12/98	09/03/98	35475	0.0000001	0.0000005	0.0000002	0.0000010	0.0000003	0.0000011

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Table 1-5 (continued). Plutonium 239 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error(±) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error(±) (pCi/m3)	Total Conc (pCi/m3)	Total Error(±) (pCi/m3)
S-207	01/21/98	02/05/98	23188	0.0000035	0.0000027	-0.0000001	0.0000001	0.0000034	0.0000027
S-207	02/05/98	03/10/98	54932	-0.0000001	0.0000011	0.0000003	0.0000007	0.0000002	0.0000013
S-207	03/10/98	04/09/98	48843	0.0000016	0.0000014	0.0000005	0.0000009	0.0000022	0.0000017
S-207	04/09/98	05/06/98	44086	0.0000008	0.0000010	0.0000006	0.0000009	0.0000014	0.0000014
S-207	05/06/98	06/04/98	47545	0.0000014	0.0000011	0.0000000	0.0000006	0.0000014	0.0000013
S-207	06/04/98	07/02/98	45397	-0.0000004	0.0000005	0.0000000	0.0000006	-0.0000004	0.0000008
S-207	07/02/98	08/12/98	67043	0.0000001	0.0000003	-0.0000002	0.0000003	-0.0000001	0.0000004
S-207	08/12/98	09/03/98	35652	-0.0000002	0.0000001	0.0000005	0.0000009	0.0000002	0.0000010
S-209	01/21/98	02/05/98	22964	0.0000018	0.0000016	0.0000008	0.0000018	0.0000026	0.0000024
S-209	02/05/98	03/10/98	55122	0.0000004	0.0000006	0.0000005	0.0000011	0.0000009	0.0000013
S-209	03/10/98	04/09/98	48822	0.0000033	0.0000019	0.0000000	0.0000008	0.0000033	0.0000021
S-209	04/09/98	05/06/98	44065	0.0000005	0.0000009	0.0000002	0.0000005	0.0000007	0.0000010
S-209	05/06/98	06/04/98	47545	0.0000001	0.0000009	0.0000005	0.0000012	0.0000007	0.0000014
S-209	06/04/98	07/02/98	45431	-0.0000005	0.0000004	0.0000002	0.0000009	-0.0000004	0.0000009
S-209	07/02/98	08/12/98	66981	-0.0000003	0.0000005	0.0000000	0.0000005	-0.0000003	0.0000007
S-209	08/12/98	09/03/98	35645	0.0000002	0.0000007	0.0000000	0.0000001	0.0000002	0.0000007
S-038	01/21/98	02/05/98	17717	N/A	N/A	N/A	N/A	0.0000026	0.0000028
S-038	02/05/98	03/10/98	41062	N/A	N/A	N/A	N/A	0.0000028	0.0000015
S-038	03/10/98	04/09/98	36382	N/A	N/A	N/A	N/A	0.0000052	0.0000026
S-038	04/09/98	05/06/98	31721	N/A	N/A	N/A	N/A	0.0000021	0.0000017
S-038	05/06/98	06/04/98	31773	N/A	N/A	N/A	N/A	0.0000019	0.0000014
S-038	06/04/98	07/02/98	22374	N/A	N/A	N/A	N/A	0.0000007	0.0000019
S-038	07/02/98	08/06/98	26662	N/A	N/A	N/A	N/A	0.0000010	0.0000013

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-6. Uranium 233, 234 Concentrations in Ambient Air for Onsite Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-107	01/20/98	02/04/98	24173	0.0000138	0.0000051	0.0000186	0.0000096	0.0000324	0.0000109
S-107	02/04/98	03/05/98	47545	0.0000111	0.0000035	0.0000157	0.0000063	0.0000268	0.0000072
S-107	03/05/98	04/08/98	55150	0.0000086	0.0000030	0.0000124	0.0000074	0.0000211	0.0000080
S-107	04/08/98	05/07/98	47266	0.0000248	0.0000045	0.0000057	0.0000056	0.0000304	0.0000071
S-107	05/07/98	05/29/98	36087	0.0000080	0.0000062	0.0000148	0.0000095	0.0000229	0.0000114
S-107	05/29/98	06/26/98	45656	0.0000104	0.0000081	0.0000052	0.0000065	0.0000155	0.0000104
S-107	06/26/98	07/24/98	45642	0.0000154	0.0000061	0.0000079	0.0000072	0.0000233	0.0000095
S-107	07/24/98	09/04/98	68320	0.0000073	0.0000045	b	b	b	b
S-007	01/20/98	02/04/98	18884	N/A	N/A	N/A	N/A	0.0000161	0.0000061
S-007	02/04/98	03/05/98	37012	N/A	N/A	N/A	N/A	0.0000174	0.0000060
S-007	03/05/98	04/08/98	42369	N/A	N/A	N/A	N/A	0.0000138	0.0000050
S-007	04/08/98	05/07/98	34915	N/A	N/A	N/A	N/A	0.0000535	0.0000086
S-007	05/07/98	06/03/98	31639	N/A	N/A	N/A	N/A	0.0000265	0.0000075
S-007	06/03/98	07/01/98	33615	N/A	N/A	N/A	N/A	0.0000175	0.0000066
S-007	07/01/98	08/06/98	41348	N/A	N/A	N/A	N/A	0.0000185	0.0000056

a Sample volumes are not corrected for temperature

b Analytical failure; no data available

N/A Not applicable

Location	On	Date	Off	Volume (m ³)	Fine (mg/m ³)	Congc (mg/m ³)	Error (±) (mg/m ³)	Carsse (mg/m ³)	Total (mg/m ³)	Error (±) (mg/m ³)	Total (mg/m ³)	Error (±) (mg/m ³)
S-131	01/21/98	02/05/98	24269	0.0000211	0.0000058	0.0000228	0.0000108	0.0000439	0.0000122			
S-131	02/05/98	03/10/98	53987	0.0000103	0.0000031	0.0000143	0.0000056	0.0000246	0.0000064			
S-131	03/10/98	04/09/98	48890	0.0000141	0.0000039	0.0000180	0.0000097	0.0000321	0.0000104			
S-131	04/09/98	05/06/98	43841	0.0000259	0.0000048	0.0000162	0.0000097	0.0000421	0.0000108			
S-131	05/06/98	06/04/98	47552	0.0000146	0.000040	0.0000420	0.0000220	0.0000566	0.0000224			
S-131	06/04/98	07/02/98	45424	0.0000040	0.00000487	0.0000094	0.0000054	0.0000143	0.0000097			
S-131	07/02/98	08/12/98	66893	0.0000097	0.0000027	0.00000436	0.0000048	0.0000181	0.0000060			
S-131	08/12/98	09/03/98	35652	0.0000169	0.0000051	0.0000143	0.0000054	0.0000240	0.0000061			
S-131	09/03/98	08/12/98	66873	0.0000206	0.0000041	0.0000132	0.0000099	0.0000517	0.0000107			
S-132	07/02/98	08/12/98	45669	0.0000209	0.0000048	0.0000352	0.0000115	0.0000629	0.0000130			
S-132	06/04/98	07/02/98	47300	0.0000282	0.0000048	0.0000118	0.0000041	0.0000613	0.0000134			
S-132	05/06/98	06/04/98	41863	0.0000367	0.0000061	0.0000246	0.0000199	0.0000471	0.0000138			
S-132	04/09/98	05/06/98	38758	0.0000226	0.0000055	0.0000245	0.0000145	0.0000421	0.0000091			
S-132	03/10/98	04/09/98	55143	0.0000052	0.0000026	0.0000082	0.0000041	0.0000134	0.0000049			
S-134	02/05/98	03/10/98	55143	0.0000052	0.0000026	0.0000081	0.0000041	0.0000134	0.0000049			
S-134	01/21/98	02/05/98	22862	0.0000181	0.0000058	0.0000112	0.0000084	0.0000293	0.0000102			
S-134												
S-134	08/12/98	09/03/98	35683	0.0000178	0.0000051	0.0000171	0.0000075	0.0000349	0.0000091			
S-132	08/12/98	09/03/98	35883	0.0000178	0.0000051	0.0000171	0.0000075	0.0000349	0.0000091			
S-132	07/02/98	08/12/98	66873	0.0000206	0.0000041	0.0000132	0.0000099	0.0000517	0.0000107			
S-132	06/04/98	07/02/98	45669	0.0000209	0.0000048	0.0000352	0.0000115	0.0000629	0.0000130			
S-132	05/06/98	06/04/98	47300	0.0000282	0.0000048	0.0000118	0.0000041	0.0000613	0.0000134			
S-132	04/09/98	05/06/98	41863	0.0000367	0.0000061	0.0000246	0.0000199	0.0000471	0.0000138			
S-132	03/10/98	04/09/98	38758	0.0000226	0.0000055	0.0000245	0.0000145	0.0000421	0.0000091			
S-132	02/05/98	03/10/98	53824	0.0000189	0.0000044	0.0000232	0.0000080	0.0000421	0.0000091			
S-132	01/21/98	02/05/98	24275	0.0000254	0.0000063	0.0000313	0.0000125	0.0000567	0.0000140			
S-132												
S-131	08/12/98	09/03/98	35652	0.0000169	0.0000051	0.0000104	0.0000059	0.0000273	0.0000078			
S-131	09/03/98	08/12/98	66893	0.0000097	0.0000027	0.0000143	0.0000054	0.0000240	0.0000061			
S-131	07/02/98	08/12/98	45424	0.0000094	0.0000036	0.0000087	0.0000048	0.0000181	0.0000060			
S-131	06/04/98	07/02/98	45424	0.0000040	0.0000040	0.0000220	0.0000056	0.0000220	0.0000060			
S-131	05/06/98	06/04/98	47552	0.0000146	0.0000048	0.0000162	0.0000097	0.0000421	0.0000108			
S-131	04/09/98	05/06/98	43841	0.0000259	0.0000048	0.0000162	0.0000097	0.0000421	0.0000108			
S-131	03/10/98	04/09/98	48890	0.0000141	0.0000039	0.0000180	0.0000097	0.0000321	0.0000104			
S-131	02/05/98	03/10/98	53987	0.0000103	0.0000031	0.0000143	0.0000056	0.0000246	0.0000064			
S-131	01/21/98	02/05/98	24269	0.0000211	0.0000058	0.0000228	0.0000108	0.0000439	0.0000122			
S-131												
S-136	08/12/98	09/03/98	35455	0.0000054	0.0000038	0.0000037	0.0000041	0.0000091	0.0000056			
S-136	07/02/98	08/12/98	66907	0.0000081	0.0000025	0.0000066	0.0000037	0.0000147	0.0000045			
S-136	06/04/98	07/02/98	45608	0.0000034	0.0000079	0.0000046	0.0000070	0.0000248	0.0000087			
S-136	05/06/98	06/04/98	47565	0.0000106	0.0000053	0.0000142	0.0000070	0.0000277	0.0000073			
S-136	04/09/98	05/06/98	44154	0.0000218	0.0000041	0.0000061	0.0000121	0.0000328	0.0000041			
S-136	03/10/98	04/09/98	48843	0.0000093	0.0000025	0.0000027	0.0000042	0.0000100	0.0000041			
S-136	02/05/98	03/10/98	5478	0.0000069	0.0000027	0.0000030	0.0000070	0.0000284	0.0000113			
S-136	01/21/98	02/05/98	23120	0.0000047	0.0000194	0.0000041	0.0000070	0.0000284	0.0000113			
S-136												

Table 1-7. Uranium 233, 234 Concentrations in Air for Perimeter Samplers^a

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Table 1-7 (continued). Uranium 233,234 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-137	01/21/98	02/05/98	23140	0.0000216	0.0000060	0.0000161	0.0000092	0.0000377	0.0000110
S-137	02/05/98	03/10/98	54878	0.0000100	0.0000031	0.0000180	0.0000067	0.0000280	0.0000074
S-137	03/10/98	04/09/98	48843	0.0000147	0.0000040	0.0000154	0.0000085	0.0000301	0.0000094
S-137	04/09/98	05/06/98	44160	0.0000254	0.0000046	0.0000079	0.0000065	0.0000333	0.0000079
S-137	05/06/98	06/04/98	47558	0.0000143	0.0000039	0.0000167	0.0000078	0.0000309	0.0000087
S-137	06/04/98	07/02/98	45622	0.0000104	0.0000037	0.0000086	0.0000048	0.0000189	0.0000061
S-137	07/02/98	08/12/98	66900	0.0000085	0.0000027	0.0000084	0.0000038	0.0000169	0.0000047
S-137	08/12/98	09/03/98	35584	0.0000133	0.0000047	0.0000097	0.0000060	0.0000230	0.0000076
S-138	01/21/98	02/05/98	23059	0.0000090	0.0000048	0.0000063	0.0000065	0.0000153	0.0000081
S-138	02/05/98	03/10/98	50984	0.0000078	0.0000030	0.0000128	0.0000053	0.0000206	0.0000061
S-138	03/10/98	04/09/98	44487	0.0000116	0.0000038	0.0000076	0.0000062	0.0000192	0.0000073
S-138	04/09/98	05/06/98	34768	0.0000281	0.0000053	-0.0000003	0.0000044	0.0000278	0.0000069
S-138	05/06/98	06/04/98	46573	0.0000151	0.0000041	0.0000116	0.0000055	0.0000267	0.0000068
S-138	06/04/98	07/02/98	45282	0.0000115	0.0000038	0.0000074	0.0000044	0.0000189	0.0000058
S-138	07/02/98	08/12/98	67056	0.0000114	0.0000031	0.0000101	0.0000045	0.0000215	0.0000054
S-138	08/12/98	09/03/98	35652	0.0000118	0.0000046	0.0000050	0.0000043	0.0000167	0.0000063
S-140	01/21/98	02/05/98	22970	0.0000245	0.0000067	0.0000255	0.0000116	0.0000500	0.0000134
S-140	02/05/98	03/10/98	55109	0.0000128	0.0000034	0.0000202	0.0000069	0.0000330	0.0000077
S-140	03/10/98	04/09/98	48843	0.0000273	0.0000056	0.0000395	0.0000166	0.0000668	0.0000175
S-140	04/09/98	05/06/98	44065	0.0000339	0.0000058	0.0000258	0.0000106	0.0000597	0.0000121
S-140	05/06/98	06/04/98	47538	0.0000237	0.0000050	0.0000320	0.0000110	0.0000557	0.0000121
S-140	06/04/98	07/02/98	45445	0.0000262	0.0000056	0.0000308	0.0000114	0.0000570	0.0000127
S-140	07/02/98	08/12/98	67015	0.0000160	0.0000035	0.0000192	0.0000067	0.0000352	0.0000076
S-140	08/12/98	09/03/98	35645	0.0000218	0.0000057	0.0000181	0.0000079	0.0000399	0.0000097
S-141	01/21/98	02/05/98	22964	0.0000096	0.0000063	0.0000146	0.0000082	0.0000241	0.0000104
S-141	02/05/98	03/10/98	55122	0.0000085	0.0000031	0.0000097	0.0000045	0.0000182	0.0000055
S-141	03/10/98	04/09/98	48843	0.0000079	0.0000032	0.0000110	0.0000078	0.0000188	0.0000084
S-141	04/09/98	05/06/98	44065	0.0000246	0.0000047	0.0000050	0.0000049	0.0000296	0.0000068
S-141	05/06/98	06/04/98	47538	0.0000144	0.0000065	0.0000137	0.0000060	0.0000281	0.0000088
S-141	06/04/98	07/02/98	45458	0.0000085	0.0000035	0.0000113	0.0000063	0.0000198	0.0000072
S-141	07/02/98	08/12/98	67002	0.0000096	0.0000028	0.0000068	0.0000033	0.0000164	0.0000043
S-141	08/12/98	09/03/98	35645	0.0000087	0.0000041	0.0000070	0.0000047	0.0000156	0.0000063
S-142	01/21/98	02/05/98	22970	0.0000144	0.0000069	0.0000187	0.0000107	0.0000331	0.0000127
S-142	02/05/98	03/10/98	55122	0.0000138	0.0000036	0.0000207	0.0000103	0.0000345	0.0000109
S-142	03/10/98	04/09/98	48843	0.0000106	0.0000035	0.0000137	0.0000066	0.0000243	0.0000075
S-142	04/09/98	05/06/98	44058	0.0000202	0.0000041	0.0000096	0.0000052	0.0000298	0.0000066
S-142	05/06/98	06/04/98	47552	0.0000202	0.0000076	0.0000086	0.0000048	0.0000288	0.0000089
S-142	06/04/98	07/02/98	45465	0.0000124	0.0000039	0.0000081	0.0000056	0.0000205	0.0000069
S-142	07/02/98	08/12/98	66961	0.0000085	0.0000027	0.0000055	0.0000031	0.0000140	0.0000041
S-142	08/12/98	09/03/98	35611	0.0000085	0.0000043	0.0000044	0.0000043	0.0000130	0.0000060

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Table 1-7 (continued). Uranium 233,234 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (±) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (±) (pCi/m3)	Total Conc (pCi/m3)	Total Error (±) (pCi/m3)
S-201	01/21/98	02/05/98	22882	0.0000216	0.0000077	0.0000057	0.0000076	0.0000273	0.0000108
S-201	02/05/98	03/10/98	55204	0.0000089	0.0000030	0.0000093	0.0000044	0.0000182	0.0000053
S-201	03/10/98	04/09/98	48890	0.0000077	0.0000031	0.0000071	0.0000060	0.0000148	0.0000067
S-201	04/09/98	05/06/98	42692	0.0000250	0.0000047	0.0000175	0.0000089	0.0000425	0.0000101
S-201	05/06/98	06/04/98	47558	0.0000199	0.0000073	0.0000136	0.0000060	0.0000335	0.0000095
S-201	06/04/98	07/02/98	40355	0.0000166	0.0000048	0.0000112	0.0000056	0.0000278	0.0000073
S-201	07/02/98	08/12/98	65969	0.0000141	0.0000033	0.0000122	0.0000051	0.0000263	0.0000061
S-201	08/12/98	09/03/98	35475	0.0000078	0.0000041	0.0000087	0.0000057	0.0000165	0.0000070
S-207	01/21/98	02/05/98	23188	0.0000096	0.0000063	0.0000167	0.0000107	0.0000263	0.0000124
S-207	02/05/98	03/10/98	54932	0.0000130	0.0000035	0.0000129	0.0000062	0.0000260	0.0000071
S-207	03/10/98	04/09/98	48843	0.0000120	0.0000037	0.0000133	0.0000065	0.0000252	0.0000074
S-207	04/09/98	05/06/98	44086	0.0000215	0.0000043	0.0000126	0.0000082	0.0000341	0.0000093
S-207	05/06/98	06/04/98	47545	0.0000157	0.0000041	0.0000100	0.0000049	0.0000257	0.0000064
S-207	06/04/98	07/02/98	45397	0.0000087	0.0000034	0.0000111	0.0000053	0.0000198	0.0000063
S-207	07/02/98	08/12/98	67043	0.0000105	0.0000029	0.0000124	0.0000069	0.0000229	0.0000075
S-207	08/12/98	09/03/98	35652	0.0000127	0.0000047	0.0000114	0.0000069	0.0000241	0.0000083
S-209	01/21/98	02/05/98	22964	0.0000157	0.0000069	0.0000065	0.0000079	0.0000223	0.0000105
S-209	02/05/98	03/10/98	55122	0.0000085	0.0000030	0.0000128	0.0000066	0.0000213	0.0000072
S-209	03/10/98	04/09/98	48822	0.0000125	0.0000038	0.0000146	0.0000068	0.0000271	0.0000078
S-209	04/09/98	05/06/98	44065	0.0000285	0.0000053	0.0000096	0.0000069	0.0000381	0.0000087
S-209	05/06/98	06/04/98	47545	0.0000109	0.0000036	0.0000132	0.0000057	0.0000240	0.0000067
S-209	06/04/98	07/02/98	45431	0.0000106	0.0000038	0.0000116	0.0000055	0.0000222	0.0000066
S-209	07/02/98	08/12/98	66981	0.0000098	0.0000027	0.0000122	0.0000067	0.0000220	0.0000072
S-209	08/12/98	09/03/98	35645	0.0000101	0.0000044	0.0000083	0.0000054	0.0000184	0.0000070
S-038	01/21/98	02/05/98	17717	0.0000000	0.0000000	0.0000000	0.0000000	0.0000229	0.0000077
S-038	02/05/98	03/10/98	41062	0.0000000	0.0000000	0.0000000	0.0000000	0.0000167	0.0000055
S-038	03/10/98	04/09/98	36382	0.0000000	0.0000000	0.0000000	0.0000000	0.0000193	0.0000061
S-038	04/09/98	05/06/98	31721	0.0000000	0.0000000	0.0000000	0.0000000	0.00000570	0.0000092
S-038	05/06/98	06/04/98	31773	0.0000000	0.0000000	0.0000000	0.0000000	0.0000278	0.0000075
S-038	06/04/98	07/02/98	22374	N/A	N/A	N/A	N/A	0.0000267	0.0000095
S-038	07/02/98	08/06/98	26662	N/A	N/A	N/A	N/A	0.0000191	0.0000078

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-8. Uranium-235 Concentrations in Ambient Air for Onsite Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-107	01/20/98	02/04/98	24173	-0.0000002	0.0000012	0.0000001	0.0000014	-0.0000001	0.0000018
S-107	02/04/98	03/05/98	47545	0.0000004	0.0000009	0.0000013	0.0000015	0.0000017	0.0000017
S-107	03/05/98	04/08/98	55150	0.0000016	0.0000010	0.0000005	0.0000015	0.0000021	0.0000018
S-107	04/08/98	05/07/98	47266	0.0000016	0.0000009	0.0000012	0.0000021	0.0000028	0.0000023
S-107	05/07/98	05/29/98	36087	0.0000013	0.0000020	-0.0000009	0.0000002	0.0000004	0.0000020
S-107	05/29/98	06/26/98	45656	0.0000029	0.0000028	-0.0000003	0.0000008	0.0000026	0.0000030
S-107	06/26/98	07/24/98	45642	0.0000002	0.0000018	0.0000004	0.0000015	0.0000006	0.0000023
S-107	07/24/98	09/04/98	68320	-0.0000023	0.0000012	b	b	b	b
S-007	01/20/98	02/04/98	18884	N/A	N/A	N/A	N/A	0.0000009	0.0000014
S-007	02/04/98	03/05/98	37012	N/A	N/A	N/A	N/A	0.0000002	0.0000013
S-007	03/05/98	04/08/98	42369	N/A	N/A	N/A	N/A	0.0000003	0.0000011
S-007	04/08/98	05/07/98	34915	N/A	N/A	N/A	N/A	0.0000021	0.0000013
S-007	05/07/98	06/03/98	31639	N/A	N/A	N/A	N/A	0.0000026	0.0000020
S-007	06/03/98	07/01/98	33615	N/A	N/A	N/A	N/A	0.0000018	0.0000020
S-007	07/01/98	08/06/98	41348	N/A	N/A	N/A	N/A	0.0000009	0.0000016

a Sample volumes are not corrected for temperature

b Analytical failure; no data available

N/A Not applicable

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Table 1-9. Uranium 235 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (\pm) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (\pm) (pCi/m3)	Total Conc (pCi/m3)	Total Error (\pm) (pCi/m3)
S-131	01/21/98	02/05/98	24269	0.0000000	0.00000011	0.0000005	0.0000020	0.0000005	0.0000023
S-131	02/05/98	03/10/98	53987	0.0000003	0.0000007	0.0000016	0.0000015	0.0000019	0.0000017
S-131	03/10/98	04/09/98	48890	0.0000009	0.0000009	0.0000004	0.0000017	0.0000013	0.0000019
S-131	04/09/98	05/06/98	43841	0.0000013	0.0000009	0.0000014	0.0000025	0.0000027	0.0000027
S-131	05/06/98	06/04/98	47552	0.0000014	0.0000012	0.0000028	0.0000044	0.0000042	0.0000045
S-131	06/04/98	07/02/98	45424	0.0000002	0.0000009	0.0000008	0.0000012	0.0000010	0.0000015
S-131	07/02/98	08/12/98	66893	-0.0000003	0.0000004	-0.0000001	0.0000001	-0.0000005	0.0000004
S-131	08/12/98	09/03/98	35652	0.0000004	0.0000012	0.0000001	0.0000009	0.0000005	0.0000015
S-132	01/21/98	02/05/98	24275	0.0000022	0.0000016	0.0000018	0.0000025	0.0000040	0.0000030
S-132	02/05/98	03/10/98	53824	0.0000009	0.0000009	0.0000004	0.0000009	0.0000013	0.0000012
S-132	03/10/98	04/09/98	38758	0.0000006	0.0000010	0.0000027	0.0000037	0.0000033	0.0000038
S-132	04/09/98	05/06/98	41863	0.0000009	0.0000008	0.0000004	0.0000016	0.0000013	0.0000018
S-132	05/06/98	06/04/98	47300	0.0000014	0.0000011	0.0000009	0.0000014	0.0000023	0.0000018
S-132	06/04/98	07/02/98	45669	-0.0000002	0.0000010	0.0000007	0.0000013	0.0000005	0.0000016
S-132	07/02/98	08/12/98	66873	0.0000004	0.0000008	0.0000033	0.0000023	0.0000037	0.0000024
S-132	08/12/98	09/03/98	35883	0.0000019	0.0000015	0.0000006	0.0000013	0.0000024	0.0000020
S-134	01/21/98	02/05/98	22862	0.0000019	0.0000016	0.0000010	0.0000024	0.0000029	0.0000028
S-134	02/05/98	03/10/98	55143	0.0000003	0.0000006	0.0000001	0.0000006	0.0000004	0.0000008
S-134	03/10/98	04/09/98	48890	0.0000002	0.0000008	0.0000005	0.0000017	0.0000007	0.0000019
S-134	04/09/98	05/06/98	43698	0.0000013	0.0000009	-0.0000002	0.0000001	0.0000010	0.0000009
S-134	05/06/98	06/04/98	47558	0.0000018	0.0000021	0.0000006	0.0000011	0.0000024	0.0000024
S-134	06/04/98	07/02/98	45574	0.0000011	0.0000011	0.0000014	0.0000017	0.0000025	0.0000021
S-134	07/02/98	08/12/98	66934	0.0000003	0.0000007	0.0000004	0.0000008	0.0000007	0.0000010
S-134	08/12/98	09/03/98	35570	0.0000010	0.0000014	0.0000001	0.0000009	0.0000011	0.0000016
S-136	01/21/98	02/05/98	23120	0.0000004	0.0000014	0.0000001	0.0000015	0.0000005	0.0000021
S-136	02/05/98	03/10/98	54878	0.0000005	0.0000008	0.0000002	0.0000008	0.0000007	0.0000011
S-136	03/10/98	04/09/98	48843	0.0000001	0.0000008	-0.0000004	0.0000003	-0.0000003	0.0000008
S-136	04/09/98	05/06/98	44154	0.0000010	0.0000008	0.0000005	0.0000018	0.0000014	0.0000020
S-136	05/06/98	06/04/98	47565	0.0000021	0.0000020	0.0000012	0.0000017	0.0000033	0.0000026
S-136	06/04/98	07/02/98	45608	0.0000014	0.0000012	0.0000000	0.0000008	0.0000014	0.0000014
S-136	07/02/98	08/12/98	66907	0.0000002	0.0000006	0.0000000	0.0000006	0.0000002	0.0000009
S-136	08/12/98	09/03/98	35455	0.0000005	0.0000011	-0.0000003	0.0000002	0.0000002	0.0000012

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Table 1-9 (continued). Uranium 235 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On-Date	Off-Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (\pm) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (\pm) (pCi/m3)	Total Conc (pCi/m3)	Total Error (\pm) (pCi/m3)
S-137	01/21/98	02/05/98	23140	-0.0000004	0.0000010	0.0000019	0.0000030	0.0000015	0.0000031
S-137	02/05/98	03/10/98	54878	0.0000000	0.0000006	0.0000003	0.0000009	0.0000003	0.0000011
S-137	03/10/98	04/09/98	48843	0.0000011	0.0000010	0.0000003	0.0000015	0.0000014	0.0000018
S-137	04/09/98	05/06/98	44160	0.0000012	0.0000009	-0.0000002	0.0000001	0.0000010	0.0000009
S-137	05/06/98	06/04/98	47558	0.0000005	0.0000009	0.0000010	0.0000018	0.0000016	0.0000020
S-137	06/04/98	07/02/98	45622	0.0000014	0.0000013	-0.0000002	0.0000008	0.0000012	0.0000015
S-137	07/02/98	08/12/98	66900	0.0000000	0.0000005	0.0000004	0.0000008	0.0000005	0.0000010
S-137	08/12/98	09/03/98	35584	0.0000005	0.0000013	-0.0000005	0.0000005	0.0000000	0.0000014
S-138	01/21/98	02/05/98	23059	-0.0000002	0.0000012	-0.0000009	0.0000007	-0.0000011	0.0000014
S-138	02/05/98	03/10/98	50984	0.0000002	0.0000006	0.0000008	0.0000011	0.0000010	0.0000013
S-138	03/10/98	04/09/98	44487	0.0000003	0.0000009	-0.0000003	0.0000002	-0.0000001	0.0000009
S-138	04/09/98	05/06/98	34768	-0.0000001	0.0000007	0.0000007	0.0000020	0.0000006	0.0000021
S-138	05/06/98	06/04/98	46573	0.0000007	0.0000009	0.0000000	0.0000007	0.0000007	0.0000011
S-138	06/04/98	07/02/98	45282	-0.0000001	0.0000009	0.0000003	0.0000010	0.0000002	0.0000013
S-138	07/02/98	08/12/98	67056	0.0000001	0.0000007	0.0000006	0.0000010	0.0000007	0.0000012
S-138	08/12/98	09/03/98	35652	0.0000002	0.0000013	0.0000001	0.0000009	0.0000003	0.0000016
S-140	01/21/98	02/05/98	22970	-0.0000006	0.0000011	0.0000001	0.0000014	-0.0000005	0.0000018
S-140	02/05/98	03/10/98	55109	0.0000006	0.0000008	0.0000014	0.0000014	0.0000020	0.0000016
S-140	03/10/98	04/09/98	48843	-0.0000003	0.0000008	0.0000006	0.0000018	0.0000003	0.0000020
S-140	04/09/98	05/06/98	44065	0.0000015	0.0000010	0.0000013	0.0000019	0.0000029	0.0000022
S-140	05/06/98	06/04/98	47538	0.0000014	0.0000012	0.0000005	0.0000011	0.0000019	0.0000016
S-140	06/04/98	07/02/98	45445	0.0000018	0.0000014	0.0000002	0.0000010	0.0000021	0.0000017
S-140	07/02/98	08/12/98	67015	0.0000014	0.0000009	0.0000009	0.0000011	0.0000022	0.0000014
S-140	08/12/98	09/03/98	35645	0.0000006	0.0000014	0.0000015	0.0000019	0.0000020	0.0000024
S-141	01/21/98	02/05/98	22964	-0.0000006	0.0000015	0.0000000	0.0000012	-0.0000006	0.0000019
S-141	02/05/98	03/10/98	55122	-0.0000002	0.0000007	0.0000009	0.0000012	0.0000007	0.0000013
S-141	03/10/98	04/09/98	48843	0.0000006	0.0000008	-0.0000003	0.0000002	0.0000003	0.0000008
S-141	04/09/98	05/06/98	44065	0.0000011	0.0000010	0.0000002	0.0000012	0.0000013	0.0000016
S-141	05/06/98	06/04/98	47538	-0.0000003	0.0000011	0.0000006	0.0000011	0.0000003	0.0000016
S-141	06/04/98	07/02/98	45458	-0.0000001	0.0000008	-0.0000004	0.0000004	-0.0000005	0.0000009
S-141	07/02/98	08/12/98	67002	0.0000008	0.0000008	0.0000004	0.0000007	0.0000013	0.0000011
S-141	08/12/98	09/03/98	35645	-0.0000002	0.0000010	0.0000001	0.0000008	-0.0000001	0.0000013
S-142	01/21/98	02/05/98	22970	0.0000004	0.0000017	-0.0000009	0.0000008	-0.0000005	0.0000019
S-142	02/05/98	03/10/98	55122	0.0000001	0.0000006	0.0000030	0.0000033	0.0000030	0.0000034
S-142	03/10/98	04/09/98	48843	0.0000004	0.0000008	0.0000006	0.0000013	0.0000010	0.0000016
S-142	04/09/98	05/06/98	44058	0.0000031	0.0000014	0.0000008	0.0000012	0.0000039	0.0000019
S-142	05/06/98	06/04/98	47552	0.0000014	0.0000023	0.0000014	0.0000016	0.0000029	0.0000027
S-142	06/04/98	07/02/98	45465	0.0000019	0.0000015	0.0000009	0.0000017	0.0000028	0.0000022
S-142	07/02/98	08/12/98	66961	0.0000004	0.0000007	0.0000005	0.0000008	0.0000009	0.0000011
S-142	08/12/98	09/03/98	35611	0.0000010	0.0000015	-0.0000003	0.0000002	0.0000007	0.0000016

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Table 1-9 (continued). Uranium 235 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-201	01/21/98	02/05/98	22882	-0.0000007	0.0000010	0.0000018	0.0000032	0.0000011	0.0000034
S-201	02/05/98	03/10/98	55204	0.0000000	0.0000005	0.0000004	0.0000008	0.0000004	0.0000010
S-201	03/10/98	04/09/98	48890	0.0000004	0.0000008	-0.0000003	0.0000002	0.0000001	0.0000008
S-201	04/09/98	05/06/98	42692	0.0000026	0.0000014	0.0000003	0.0000013	0.0000029	0.0000019
S-201	05/06/98	06/04/98	47558	0.0000008	0.0000018	0.0000013	0.0000017	0.0000021	0.0000025
S-201	06/04/98	07/02/98	40355	0.0000018	0.0000014	0.0000000	0.0000008	0.0000017	0.0000016
S-201	07/02/98	08/12/98	65969	0.0000003	0.0000007	0.0000001	0.0000006	0.0000005	0.0000009
S-201	08/12/98	09/03/98	35475	0.0000003	0.0000013	0.0000016	0.0000020	0.0000019	0.0000024
S-207	01/21/98	02/05/98	23188	-0.0000009	0.0000010	-0.0000004	0.0000003	-0.0000013	0.0000011
S-207	02/05/98	03/10/98	54932	0.0000004	0.0000008	0.0000007	0.0000013	0.0000011	0.0000015
S-207	03/10/98	04/09/98	48843	0.0000007	0.0000008	-0.0000003	0.0000003	0.0000004	0.0000009
S-207	04/09/98	05/06/98	44086	0.0000029	0.0000013	0.0000009	0.0000024	0.0000038	0.0000027
S-207	05/06/98	06/04/98	47545	0.0000014	0.0000011	0.0000012	0.0000013	0.0000025	0.0000017
S-207	06/04/98	07/02/98	45397	0.0000014	0.0000012	0.0000008	0.0000012	0.0000022	0.0000017
S-207	07/02/98	08/12/98	67043	0.0000002	0.0000008	0.0000005	0.0000012	0.0000007	0.0000015
S-207	08/12/98	09/03/98	35652	0.0000010	0.0000015	0.0000015	0.0000022	0.0000025	0.0000026
S-209	01/21/98	02/05/98	22964	-0.0000001	0.0000014	0.0000007	0.0000023	0.0000006	0.0000027
S-209	02/05/98	03/10/98	55122	0.0000004	0.0000007	-0.0000002	0.0000001	0.0000002	0.0000007
S-209	03/10/98	04/09/98	48822	0.0000003	0.0000008	0.0000021	0.0000022	0.0000024	0.0000023
S-209	04/09/98	05/06/98	44065	0.0000023	0.0000013	0.0000015	0.0000026	0.0000039	0.0000029
S-209	05/06/98	06/04/98	47545	0.0000015	0.0000012	0.0000006	0.0000010	0.0000021	0.0000016
S-209	06/04/98	07/02/98	45431	-0.0000003	0.0000010	-0.0000004	0.0000003	-0.0000006	0.0000011
S-209	07/02/98	08/12/98	66981	0.0000000	0.0000006	0.0000004	0.0000011	0.0000004	0.0000013
S-209	08/12/98	09/03/98	35645	-0.0000001	0.0000011	0.0000010	0.0000017	0.0000009	0.0000020
S-038	01/21/98	02/05/98	17717	N/A	N/A	N/A	N/A	0.0000004	0.0000018
S-038	02/05/98	03/10/98	41062	N/A	N/A	N/A	N/A	0.0000018	0.0000016
S-038	03/10/98	04/09/98	36382	N/A	N/A	N/A	N/A	0.0000011	0.0000015
S-038	04/09/98	05/06/98	31721	N/A	N/A	N/A	N/A	0.0000027	0.0000014
S-038	05/06/98	06/04/98	31773	N/A	N/A	N/A	N/A	0.0000020	0.0000020
S-038	06/04/98	07/02/98	22374	N/A	N/A	N/A	N/A	-0.0000008	0.0000021
S-038	07/02/98	08/06/98	26662	N/A	N/A	N/A	N/A	0.0000021	0.0000027

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-10. Uranium 238 Concentrations in Ambient Air for Onsite Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-107	01/20/98	02/04/98	24173	0.0000180	0.0000056	0.0000092	0.0000080	0.0000272	0.0000098
S-107	02/04/98	03/05/98	47545	0.0000074	0.0000031	0.0000137	0.0000062	0.0000211	0.0000069
S-107	03/05/98	04/08/98	55150	0.0000112	0.0000032	0.0000190	0.0000100	0.0000302	0.0000105
S-107	04/08/98	05/07/98	47266	0.0000226	0.0000042	0.0000122	0.0000082	0.0000348	0.0000092
S-107	05/07/98	05/29/98	36087	0.0000168	0.0000065	0.0000072	0.0000093	0.0000239	0.0000114
S-107	05/29/98	06/26/98	45656	0.0000201	0.0000086	0.0000044	0.0000081	0.0000245	0.0000118
S-107	06/26/98	07/24/98	45642	0.0000194	0.0000064	0.0000053	0.0000084	0.0000247	0.0000105
S-107	07/24/98	09/04/98	68320	0.0000074	0.0000045	b	b	b	b
S-007	01/20/98	02/04/98	18884	N/A	N/A	N/A	N/A	0.0000182	0.0000064
S-007	02/04/98	03/05/98	37012	N/A	N/A	N/A	N/A	0.0000175	0.0000061
S-007	03/05/98	04/08/98	42369	N/A	N/A	N/A	N/A	0.0000190	0.0000054
S-007	04/08/98	05/07/98	34915	N/A	N/A	N/A	N/A	0.0000481	0.0000080
S-007	05/07/98	06/03/98	31639	N/A	N/A	N/A	N/A	0.0000341	0.0000082
S-007	06/03/98	07/01/98	33615	N/A	N/A	N/A	N/A	0.0000175	0.0000066
S-007	07/01/98	08/06/98	41348	N/A	N/A	N/A	N/A	0.0000168	0.0000054

a Sample volumes are not corrected for temperature

b Analytical failure; no data available

N/A Not applicable

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Table 1-11. Uranium 238 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (±) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (±) (pCi/m3)	Total Conc (pCi/m3)	Total Error (±) (pCi/m3)
S-131	01/21/98	02/05/98	24269	0.0000138	0.0000052	0.0000198	0.0000109	0.0000336	0.0000121
S-131	02/05/98	03/10/98	53987	0.0000091	0.0000030	0.0000135	0.0000058	0.0000226	0.0000065
S-131	03/10/98	04/09/98	48890	0.0000162	0.0000041	0.0000247	0.0000122	0.0000409	0.0000129
S-131	04/09/98	05/06/98	43841	0.0000228	0.0000044	0.0000179	0.0000108	0.0000406	0.0000116
S-131	05/06/98	06/04/98	47552	0.0000163	0.0000042	0.0000457	0.0000241	0.0000620	0.0000245
S-131	06/04/98	07/02/98	45424	0.0000151	0.0000042	0.0000115	0.0000060	0.0000265	0.0000073
S-131	07/02/98	08/12/98	66893	0.0000114	0.0000029	0.0000163	0.0000062	0.0000277	0.0000069
S-131	08/12/98	09/03/98	35652	0.0000129	0.0000046	0.0000114	0.0000068	0.0000243	0.0000082
S-132	01/21/98	02/05/98	24275	0.0000295	0.0000068	0.0000361	0.0000145	0.0000656	0.0000160
S-132	02/05/98	03/10/98	53824	0.0000157	0.0000039	0.0000242	0.0000086	0.0000399	0.0000095
S-132	03/10/98	04/09/98	38758	0.0000268	0.0000060	0.0000319	0.0000156	0.0000587	0.0000167
S-132	04/09/98	05/06/98	41863	0.0000371	0.0000061	0.0000277	0.0000133	0.0000648	0.0000147
S-132	05/06/98	06/04/98	47300	0.0000234	0.0000048	0.0000329	0.0000117	0.0000563	0.0000127
S-132	06/04/98	07/02/98	45669	0.0000223	0.0000049	0.0000293	0.0000105	0.0000515	0.0000116
S-132	07/02/98	08/12/98	66873	0.0000169	0.0000037	0.0000307	0.0000100	0.0000476	0.0000107
S-132	08/12/98	09/03/98	35883	0.0000207	0.0000054	0.0000178	0.0000084	0.0000385	0.0000100
S-134	01/21/98	02/05/98	22862	0.0000157	0.0000057	0.0000159	0.0000108	0.0000316	0.0000122
S-134	02/05/98	03/10/98	55143	0.0000056	0.0000026	0.0000063	0.0000040	0.0000119	0.0000048
S-134	03/10/98	04/09/98	48890	0.0000082	0.0000031	0.0000083	0.0000071	0.0000165	0.0000078
S-134	04/09/98	05/06/98	43698	0.0000223	0.0000043	0.0000072	0.0000070	0.0000295	0.0000082
S-134	05/06/98	06/04/98	47558	0.0000159	0.0000067	0.0000047	0.0000040	0.0000206	0.0000078
S-134	06/04/98	07/02/98	45574	0.0000087	0.0000034	0.0000081	0.0000054	0.0000167	0.0000064
S-134	07/02/98	08/12/98	66934	0.0000073	0.0000025	0.0000072	0.0000041	0.0000145	0.0000048
S-134	08/12/98	09/03/98	35570	0.0000084	0.0000041	0.0000073	0.0000058	0.0000157	0.0000071
S-136	01/21/98	02/05/98	23120	0.0000109	0.0000050	0.0000162	0.0000105	0.0000272	0.0000116
S-136	02/05/98	03/10/98	54878	0.0000068	0.0000027	0.0000087	0.0000045	0.0000155	0.0000053
S-136	03/10/98	04/09/98	48843	0.0000057	0.0000029	0.0000064	0.0000062	0.0000121	0.0000068
S-136	04/09/98	05/06/98	44154	0.0000232	0.0000043	0.0000047	0.0000063	0.0000279	0.0000076
S-136	05/06/98	06/04/98	47565	0.0000143	0.0000058	0.0000208	0.0000092	0.0000351	0.0000108
S-136	06/04/98	07/02/98	45608	0.0000101	0.0000035	0.0000082	0.0000052	0.0000183	0.0000062
S-136	07/02/98	08/12/98	66907	0.0000059	0.0000023	0.0000061	0.0000039	0.0000120	0.0000045
S-136	08/12/98	09/03/98	35455	0.0000111	0.0000044	0.0000042	0.0000049	0.0000153	0.0000066
S-137	01/21/98	02/05/98	23140	0.0000161	0.0000056	0.0000092	0.0000084	0.0000253	0.0000101
S-137	02/05/98	03/10/98	54878	0.0000114	0.0000032	0.0000155	0.0000065	0.0000269	0.0000072
S-137	03/10/98	04/09/98	48843	0.0000146	0.0000040	0.0000139	0.0000086	0.0000286	0.0000094
S-137	04/09/98	05/06/98	44160	0.0000277	0.0000049	0.0000126	0.0000086	0.0000404	0.0000099
S-137	05/06/98	06/04/98	47558	0.0000135	0.0000038	0.0000238	0.0000101	0.0000374	0.0000108
S-137	06/04/98	07/02/98	45622	0.0000096	0.0000036	0.0000084	0.0000052	0.0000180	0.0000063
S-137	07/02/98	08/12/98	66900	0.0000085	0.0000027	0.0000092	0.0000043	0.0000177	0.0000051
S-137	08/12/98	09/03/98	35584	0.0000103	0.0000044	0.0000063	0.0000057	0.0000166	0.0000072

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Table 1-11 (continued). Uranium 238 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-138	01/21/98	02/05/98	23059	0.0000081	0.0000047	0.0000065	0.0000076	0.0000147	0.0000090
S-138	02/05/98	03/10/98	50984	0.0000081	0.0000030	0.0000100	0.0000050	0.0000181	0.0000058
S-138	03/10/98	04/09/98	44487	0.0000116	0.0000038	0.0000080	0.0000071	0.0000196	0.0000080
S-138	04/09/98	05/06/98	34768	0.0000294	0.0000054	0.0000061	0.0000077	0.0000355	0.0000094
S-138	05/06/98	06/04/98	46573	0.0000108	0.0000036	0.0000100	0.0000055	0.0000209	0.0000066
S-138	06/04/98	07/02/98	45282	0.0000107	0.0000036	0.0000091	0.0000053	0.0000199	0.0000065
S-138	07/02/98	08/12/98	67056	0.0000088	0.0000027	0.0000077	0.0000042	0.0000165	0.0000050
S-138	08/12/98	09/03/98	35652	0.0000098	0.0000043	0.0000029	0.0000045	0.0000128	0.0000062
S-140	01/21/98	02/05/98	22970	0.0000225	0.0000066	0.0000231	0.0000120	0.0000456	0.0000137
S-140	02/05/98	03/10/98	55109	0.0000138	0.0000035	0.0000223	0.0000077	0.0000361	0.0000085
S-140	03/10/98	04/09/98	48843	0.0000266	0.0000055	0.0000389	0.0000170	0.0000655	0.0000178
S-140	04/09/98	05/06/98	44065	0.0000347	0.0000059	0.0000171	0.0000087	0.0000518	0.0000105
S-140	05/06/98	06/04/98	47538	0.0000237	0.0000050	0.0000348	0.0000121	0.0000585	0.0000131
S-140	06/04/98	07/02/98	45445	0.0000242	0.0000053	0.0000354	0.0000131	0.0000595	0.0000141
S-140	07/02/98	08/12/98	67015	0.0000160	0.0000035	0.0000197	0.0000071	0.0000358	0.0000079
S-140	08/12/98	09/03/98	35645	0.0000019	0.0000054	0.0000240	0.0000100	0.0000259	0.0000113
S-141	01/21/98	02/05/98	22964	0.0000109	0.0000064	0.0000093	0.0000078	0.0000202	0.0000101
S-141	02/05/98	03/10/98	55122	0.0000079	0.0000031	0.0000140	0.0000060	0.0000220	0.0000067
S-141	03/10/98	04/09/98	48843	0.0000119	0.0000036	0.0000240	0.0000126	0.0000359	0.0000131
S-141	04/09/98	05/06/98	44065	0.0000213	0.0000043	0.0000121	0.0000075	0.0000334	0.0000087
S-141	05/06/98	06/04/98	47538	0.0000118	0.0000060	0.0000138	0.0000064	0.0000257	0.0000088
S-141	06/04/98	07/02/98	45458	0.0000089	0.0000035	0.0000086	0.0000060	0.0000175	0.0000070
S-141	07/02/98	08/12/98	67002	0.0000110	0.0000030	0.0000051	0.0000031	0.0000161	0.0000043
S-141	08/12/98	09/03/98	35645	0.0000082	0.0000040	0.0000058	0.0000051	0.0000140	0.0000065
S-142	01/21/98	02/05/98	22970	0.0000058	0.0000061	0.0000157	0.0000110	0.0000215	0.0000125
S-142	02/05/98	03/10/98	55122	0.0000108	0.0000033	0.0000229	0.0000114	0.0000337	0.0000119
S-142	03/10/98	04/09/98	48843	0.0000093	0.0000033	0.0000123	0.0000066	0.0000217	0.0000074
S-142	04/09/98	05/06/98	44058	0.0000210	0.0000042	0.0000112	0.0000061	0.0000323	0.0000074
S-142	05/06/98	06/04/98	47552	0.0000147	0.0000067	0.0000090	0.0000052	0.0000236	0.0000085
S-142	06/04/98	07/02/98	45465	0.0000111	0.0000038	0.0000089	0.0000064	0.0000200	0.0000074
S-142	07/02/98	08/12/98	66961	0.0000078	0.0000026	0.0000042	0.0000031	0.0000120	0.0000040
S-142	08/12/98	09/03/98	35611	0.0000075	0.0000041	0.0000017	0.0000042	0.0000092	0.0000059
S-201	01/21/98	02/05/98	22882	0.0000180	0.0000073	0.0000080	0.0000094	0.0000259	0.0000119
S-201	02/05/98	03/10/98	55204	0.0000070	0.0000027	0.0000107	0.0000051	0.0000176	0.0000058
S-201	03/10/98	04/09/98	48890	0.0000099	0.0000033	0.0000064	0.0000063	0.0000163	0.0000071
S-201	04/09/98	05/06/98	42692	0.0000243	0.0000046	0.0000135	0.0000082	0.0000378	0.0000095
S-201	05/06/98	06/04/98	47558	0.0000191	0.0000072	0.0000100	0.0000055	0.0000291	0.0000090
S-201	06/04/98	07/02/98	40355	0.0000183	0.0000050	0.0000076	0.0000051	0.0000259	0.0000071
S-201	07/02/98	08/12/98	65969	0.0000128	0.0000032	0.0000108	0.0000051	0.0000237	0.0000060
S-201	08/12/98	09/03/98	35475	0.0000121	0.0000045	0.0000076	0.0000060	0.0000197	0.0000075

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Table 1-11 (continued). Uranium 238 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-207	01/21/98	02/05/98	23188	0.0000185	0.0000072	0.0000130	0.0000105	0.0000315	0.0000128
S-207	02/05/98	03/10/98	54932	0.0000131	0.0000035	0.0000085	0.0000053	0.0000216	0.0000064
S-207	03/10/98	04/09/98	48843	0.0000117	0.0000036	0.0000120	0.0000066	0.0000237	0.0000075
S-207	04/09/98	05/06/98	44086	0.0000231	0.0000045	0.0000218	0.0000116	0.0000449	0.0000125
S-207	05/06/98	06/04/98	47545	0.0000138	0.0000039	0.0000125	0.0000059	0.0000263	0.0000070
S-207	06/04/98	07/02/98	45397	0.0000128	0.0000038	0.0000088	0.0000052	0.0000216	0.0000064
S-207	07/02/98	08/12/98	67043	0.0000103	0.0000029	0.0000195	0.0000096	0.0000298	0.0000100
S-207	08/12/98	09/03/98	35652	0.0000129	0.0000047	0.0000089	0.0000068	0.0000217	0.0000083
S-209	01/21/98	02/05/98	22964	0.0000133	0.0000066	0.0000134	0.0000112	0.0000266	0.0000130
S-209	02/05/98	03/10/98	55122	0.0000081	0.0000029	0.0000066	0.0000052	0.0000148	0.0000059
S-209	03/10/98	04/09/98	48822	0.0000099	0.0000034	0.0000134	0.0000069	0.0000232	0.0000077
S-209	04/09/98	05/06/98	44065	0.0000253	0.0000049	0.0000171	0.0000097	0.0000424	0.0000108
S-209	05/06/98	06/04/98	47545	0.0000115	0.0000037	0.0000087	0.0000050	0.0000201	0.0000062
S-209	06/04/98	07/02/98	45431	0.0000095	0.0000036	0.0000104	0.0000056	0.0000199	0.0000067
S-209	07/02/98	08/12/98	66981	0.0000071	0.0000024	0.0000128	0.0000073	0.0000198	0.0000076
S-209	08/12/98	09/03/98	35645	0.0000090	0.0000042	0.0000094	0.0000064	0.0000184	0.0000077
S-038	01/21/98	02/05/98	17717	N/A	N/A	N/A	N/A	0.0000200	0.0000073
S-038	02/05/98	03/10/98	41062	N/A	N/A	N/A	N/A	0.0000142	0.0000054
S-038	03/10/98	04/09/98	36382	N/A	N/A	N/A	N/A	0.0000152	0.0000057
S-038	04/09/98	05/06/98	31721	N/A	N/A	N/A	N/A	0.0000504	0.0000084
S-038	05/06/98	06/04/98	31773	N/A	N/A	N/A	N/A	0.0000282	0.0000075
S-038	06/04/98	07/02/98	22374	N/A	N/A	N/A	N/A	0.0000251	0.0000093
S-038	07/02/98	08/06/98	26662	N/A	N/A	N/A	N/A	0.0000278	0.0000086

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-12. Americium 241 Concentrations in Ambient Air for Onsite Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-107	01/20/98	02/04/98	24173	0.0000025	0.0000026	0.0001109	0.0000333	0.0001134	0.0000334
S-107	02/04/98	03/05/98	47545	0.0000017	0.0000012	0.0000048	0.0000036	0.0000065	0.0000038
S-107	03/05/98	04/08/98	55150	0.0000010	0.0000008	0.0000021	0.0000017	0.0000031	0.0000019
S-107	04/08/98	05/07/98	47266	0.0000020	0.0000009	0.0000035	0.0000025	0.0000055	0.0000026
S-107	05/07/98	05/29/98	36087	0.0000021	0.0000018	0.0000068	0.0000047	0.0000090	0.0000050
S-107	05/29/98	06/26/98	45656	0.0000014	0.0000018	0.0000043	0.0000032	0.0000057	0.0000037
S-107	06/26/98	07/24/98	45642	0.0000037	0.0000019	0.0000023	0.0000030	0.0000060	0.0000036
S-107	07/24/98	09/04/98	68320	0.0000022	0.0000012	0.0000007	0.0000036	0.0000030	0.0000038
S-007	01/20/98	02/04/98	18884	N/A	N/A	N/A	N/A	0.0000061	0.0000027
S-007	02/04/98	03/05/98	37012	N/A	N/A	N/A	N/A	0.0000080	0.0000026
S-007	03/05/98	04/08/98	42369	N/A	N/A	N/A	N/A	0.0000040	0.0000016
S-007	04/08/98	05/07/98	34915	N/A	N/A	N/A	N/A	0.0000063	0.0000022
S-007	05/07/98	06/03/98	31639	N/A	N/A	N/A	N/A	0.0000087	0.0000030
S-007	06/03/98	07/01/98	33615	N/A	N/A	N/A	N/A	0.0000041	0.0000029
S-007	07/01/98	08/06/98	41348	N/A	N/A	N/A	N/A	0.0000088	0.0000023

a Sample volumes are not corrected for temperature

N/A Not applicable

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Table 1-13. Americium 241 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-131	01/21/98	02/05/98	24269	0.0000002	0.0000016	0.0000010	0.0000033	0.0000012	0.0000037
S-131	02/05/98	03/10/98	53987	0.0000005	0.0000006	-0.0000007	0.0000018	-0.0000003	0.0000019
S-131	03/10/98	04/09/98	48890	0.0000011	0.0000008	0.0000017	0.0000021	0.0000028	0.0000023
S-131	04/09/98	05/06/98	43841	0.0000009	0.0000007	-0.0000010	0.0000013	-0.0000001	0.0000014
S-131	05/06/98	06/04/98	47552	-0.0000003	0.0000009	0.0000014	0.0000027	0.0000011	0.0000028
S-131	06/04/98	07/02/98	45424	0.0000011	0.0000013	0.0000002	0.0000014	0.0000013	0.0000019
S-131	07/02/98	08/12/98	66893	0.0000003	0.0000006	0.0000004	0.0000012	0.0000007	0.0000013
S-131	08/12/98	09/03/98	35652	-0.0000001	0.0000010	0.0000002	0.0000019	0.0000001	0.0000021
S-132	01/21/98	02/05/98	24275	-0.0000007	0.0000012	0.0000010	0.0000032	0.0000003	0.0000034
S-132	02/05/98	03/10/98	53824	-0.0000001	0.0000007	-0.0000003	0.0000012	-0.0000005	0.0000014
S-132	03/10/98	04/09/98	38758	-0.0000001	0.0000007	0.0000010	0.0000034	0.0000009	0.0000035
S-132	04/09/98	05/06/98	41863	0.0000004	0.0000006	-0.0000002	0.0000014	0.0000002	0.0000015
S-132	05/06/98	06/04/98	47300	0.0000004	0.0000006	-0.0000029	0.0000024	-0.0000025	0.0000025
S-132	06/04/98	07/02/98	45669	0.0000022	0.0000018	0.0000001	0.0000017	0.0000023	0.0000025
S-132	07/02/98	08/12/98	66873	-0.0000003	0.0000004	0.0000005	0.0000012	0.0000001	0.0000012
S-132	08/12/98	09/03/98	35883	0.0000004	0.0000009	0.0000007	0.0000022	0.0000011	0.0000024
S-134	01/21/98	02/05/98	22862	0.0000003	0.0000010	0.0000039	0.0000043	0.0000042	0.0000044
S-134	02/05/98	03/10/98	55143	0.0000000	0.0000006	0.0000000	0.0000012	0.0000000	0.0000013
S-134	03/10/98	04/09/98	48890	0.0000003	0.0000006	-0.0000003	0.0000013	0.0000000	0.0000014
S-134	04/09/98	05/06/98	43698	0.0000007	0.0000006	0.0000008	0.0000018	0.0000015	0.0000018
S-134	05/06/98	06/04/98	47558	-0.0000007	0.0000008	-0.0000015	0.0000023	-0.0000022	0.0000024
S-134	06/04/98	07/02/98	45574	-0.0000004	0.0000010	0.0000011	0.0000022	0.0000006	0.0000024
S-134	07/02/98	08/12/98	66934	0.0000003	0.0000006	-0.0000005	0.0000009	-0.0000002	0.0000011
S-134	08/12/98	09/03/98	35570	0.0000009	0.0000009	-0.0000014	0.0000022	-0.0000005	0.0000023
S-136	01/21/98	02/05/98	23120	-0.0000005	0.0000008	0.0000012	0.0000036	0.0000007	0.0000037
S-136	02/05/98	03/10/98	54878	-0.0000002	0.0000005	-0.0000002	0.0000010	-0.0000004	0.0000012
S-136	03/10/98	04/09/98	48843	-0.0000003	0.0000008	-0.0000004	0.0000012	-0.0000007	0.0000014
S-136	04/09/98	05/06/98	44154	0.0000001	0.0000006	0.0000024	0.0000022	0.0000025	0.0000022
S-136	05/06/98	06/04/98	47565	0.0000004	0.0000006	0.0000037	0.0000070	0.0000041	0.0000071
S-136	06/04/98	07/02/98	45608	0.0000014	0.0000012	0.0000016	0.0000019	0.0000030	0.0000022
S-136	07/02/98	08/12/98	66907	0.0000002	0.0000004	0.0000008	0.0000017	0.0000010	0.0000017
S-136	08/12/98	09/03/98	35455	0.0000013	0.0000011	-0.0000005	0.0000021	0.0000009	0.0000024
S-137	01/21/98	02/05/98	23140	-0.0000013	0.0000013	-0.0000033	0.0000031	-0.0000046	0.0000033
S-137	02/05/98	03/10/98	54878	0.0000000	0.0000006	0.0000011	0.0000014	0.0000011	0.0000015
S-137	03/10/98	04/09/98	48843	0.0000001	0.0000008	-0.0000003	0.0000007	-0.0000002	0.0000011
S-137	04/09/98	05/06/98	44160	0.0000006	0.0000008	0.0000002	0.0000016	0.0000008	0.0000018
S-137	05/06/98	06/04/98	47558	0.0000004	0.0000009	0.0000030	0.0000042	0.0000034	0.0000043
S-137	06/04/98	07/02/98	45622	0.0000005	0.0000010	-0.0000010	0.0000020	-0.0000005	0.0000022
S-137	07/02/98	08/12/98	66900	0.0000003	0.0000004	-0.0000002	0.0000013	0.0000001	0.0000013
S-137	08/12/98	09/03/98	35584	0.0000014	0.0000020	-0.0000001	0.0000015	0.0000012	0.0000025

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Table 1-13 (continued). Americium 241 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m ³)	Fine Conc (pCi/m ³)	Fine Error (±) (pCi/m ³)	Coarse Conc (pCi/m ³)	Coarse Error (±) (pCi/m ³)	Total Conc (pCi/m ³)	Total Error (±) (pCi/m ³)
S-138	01/21/98	02/05/98	23059	-0.0000011	0.0000015	-0.0000022	0.0000027	-0.0000033	0.0000031
S-138	02/05/98	03/10/98	50984	0.0000004	0.0000006	0.0000002	0.0000014	0.0000006	0.0000015
S-138	03/10/98	04/09/98	44487	-0.0000004	0.0000010	0.0000006	0.0000018	0.0000001	0.0000020
S-138	04/09/98	05/06/98	34768	-0.0000001	0.0000007	0.0000001	0.0000028	0.0000000	0.0000029
S-138	05/06/98	06/04/98	46573	0.0000007	0.0000007	-0.0000004	0.0000017	0.0000002	0.0000019
S-138	06/04/98	07/02/98	45282	0.0000013	0.0000014	-0.0000003	0.0000022	0.0000010	0.0000026
S-138	07/02/98	08/12/98	67056	0.0000000	0.0000004	0.0000006	0.0000011	0.0000006	0.0000011
S-138	08/12/98	09/03/98	35652	-0.0000002	0.0000012	-0.0000009	0.0000014	-0.0000011	0.0000019
S-140	01/21/98	02/05/98	22970	-0.0000005	0.0000016	0.0000018	0.0000039	0.0000013	0.0000042
S-140	02/05/98	03/10/98	55109	-0.0000001	0.0000010	-0.0000008	0.0000009	-0.0000009	0.0000014
S-140	03/10/98	04/09/98	48843	0.0000000	0.0000005	-0.0000002	0.0000017	-0.0000002	0.0000018
S-140	04/09/98	05/06/98	44065	0.0000004	0.0000012	0.0000023	0.0000023	0.0000027	0.0000026
S-140	05/06/98	06/04/98	47538	0.0000007	0.0000008	0.0000037	0.0000030	0.0000044	0.0000031
S-140	06/04/98	07/02/98	45445	-0.0000003	0.0000013	-0.0000001	0.0000015	-0.0000004	0.0000020
S-140	07/02/98	08/12/98	67015	-0.0000006	0.0000010	0.0000000	0.0000012	-0.0000006	0.0000015
S-140	08/12/98	09/03/98	35645	0.0000010	0.0000009	-0.0000009	0.0000018	0.0000001	0.0000020
S-141	01/21/98	02/05/98	22964	-0.0000001	0.0000014	-0.0000005	0.0000029	-0.0000006	0.0000032
S-141	02/05/98	03/10/98	55122	0.0000001	0.0000006	-0.0000004	0.0000015	-0.0000003	0.0000016
S-141	03/10/98	04/09/98	48843	-0.0000002	0.0000007	-0.0000010	0.0000012	-0.0000012	0.0000014
S-141	04/09/98	05/06/98	44065	0.0000003	0.0000006	-0.0000012	0.0000014	-0.0000009	0.0000015
S-141	05/06/98	06/04/98	47538	-0.0000001	0.0000005	-0.0000006	0.0000017	-0.0000007	0.0000018
S-141	06/04/98	07/02/98	45458	0.0000014	0.0000014	0.0000000	0.0000013	0.0000014	0.0000019
S-141	07/02/98	08/12/98	67002	0.0000001	0.0000004	-0.0000002	0.0000012	-0.0000001	0.0000012
S-141	08/12/98	09/03/98	35645	0.0000001	0.0000007	0.0000006	0.0000021	0.0000006	0.0000022
S-142	01/21/98	02/05/98	22970	-0.0000006	0.0000010	0.0000009	0.0000044	0.0000004	0.0000045
S-142	02/05/98	03/10/98	55122	0.0000000	0.0000005	0.0000012	0.0000022	0.0000012	0.0000022
S-142	03/10/98	04/09/98	48843	0.0000000	0.0000006	-0.0000007	0.0000013	-0.0000007	0.0000014
S-142	04/09/98	05/06/98	44058	0.0000003	0.0000007	-0.0000001	0.0000013	0.0000002	0.0000015
S-142	05/06/98	06/04/98	47552	0.0000007	0.0000013	0.0000027	0.0000024	0.0000034	0.0000027
S-142	06/04/98	07/02/98	45465	-0.0000005	0.0000009	0.0000005	0.0000014	0.0000000	0.0000016
S-142	07/02/98	08/12/98	66961	0.0000010	0.0000012	-0.0000002	0.0000008	0.0000008	0.0000014
S-142	08/12/98	09/03/98	35611	0.0000001	0.0000014	-0.0000018	0.0000017	-0.0000016	0.0000022
S-201	01/21/98	02/05/98	22882	0.0000014	0.0000029	0.0000006	0.0000033	0.0000020	0.0000044
S-201	02/05/98	03/10/98	55204	0.0000001	0.0000005	-0.0000007	0.0000011	-0.0000006	0.0000012
S-201	03/10/98	04/09/98	48890	0.0000001	0.0000005	-0.0000003	0.0000013	-0.0000002	0.0000014
S-201	04/09/98	05/06/98	42692	0.0000005	0.0000004	-0.0000011	0.0000010	-0.0000006	0.0000011
S-201	05/06/98	06/04/98	47558	0.0000005	0.0000006	0.0000012	0.0000018	0.0000017	0.0000019
S-201	06/04/98	07/02/98	40355	0.0000020	0.0000012	0.0000025	0.0000031	0.0000045	0.0000033
S-201	07/02/98	08/12/98	65969	-0.0000001	0.0000003	0.0000017	0.0000020	0.0000016	0.0000020
S-201	08/12/98	09/03/98	35475	0.0000003	0.0000007	0.0000002	0.0000019	0.0000005	0.0000020

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Table 1-13 (continued). Americium 241 Concentrations in Ambient Air for Perimeter Samplers^a

Location	On Date	Off Date	Volume (m3)	Fine Conc (pCi/m3)	Fine Error (±) (pCi/m3)	Coarse Conc (pCi/m3)	Coarse Error (±) (pCi/m3)	Total Conc (pCi/m3)	Total Error (±) (pCi/m3)
S-207	01/21/98	02/05/98	23188	0.0000018	0.0000018	-0.0000011	0.0000028	0.0000008	0.0000033
S-207	02/05/98	03/10/98	54932	-0.0000005	0.0000008	0.0000005	0.0000012	0.0000000	0.0000014
S-207	03/10/98	04/09/98	48843	0.0000001	0.0000006	-0.0000016	0.0000014	-0.0000016	0.0000015
S-207	04/09/98	05/06/98	44086	-0.0000001	0.0000006	0.0000007	0.0000019	0.0000006	0.0000020
S-207	05/06/98	06/04/98	47545	-0.0000008	0.0000010	-0.0000005	0.0000014	-0.0000012	0.0000017
S-207	06/04/98	07/02/98	45397	0.0000024	0.0000014	0.0000007	0.0000015	0.0000031	0.0000020
S-207	07/02/98	08/12/98	67043	0.0000004	0.0000006	0.0000000	0.0000012	0.0000004	0.0000014
S-207	08/12/98	09/03/98	35652	-0.0000003	0.0000018	-0.0000010	0.0000021	-0.0000014	0.0000028
S-209	01/21/98	02/05/98	22964	-0.0000002	0.0000010	0.0000033	0.0000055	0.0000032	0.0000056
S-209	02/05/98	03/10/98	55122	0.0000008	0.0000012	0.0000002	0.0000013	0.0000010	0.0000018
S-209	03/10/98	04/09/98	48822	0.0000005	0.0000012	-0.0000011	0.0000007	-0.0000006	0.0000014
S-209	04/09/98	05/06/98	44065	0.0000003	0.0000008	-0.0000005	0.0000011	-0.0000002	0.0000014
S-209	05/06/98	06/04/98	47545	0.0000001	0.0000005	0.0000003	0.0000013	0.0000005	0.0000014
S-209	06/04/98	07/02/98	45431	0.0000002	0.0000011	-0.0000002	0.0000016	0.0000000	0.0000020
S-209	07/02/98	08/12/98	66981	-0.0000001	0.0000006	-0.0000004	0.0000008	-0.0000005	0.0000010
S-209	08/12/98	09/03/98	35645	0.0000002	0.0000010	-0.0000003	0.0000016	-0.0000001	0.0000019
S-038	01/21/98	02/05/98	17717	N/A	N/A	N/A	N/A	0.0000025	0.0000027
S-038	02/05/98	03/10/98	41062	N/A	N/A	N/A	N/A	-0.0000006	0.0000009
S-038	03/10/98	04/09/98	36382	N/A	N/A	N/A	N/A	-0.0000004	0.0000011
S-038	04/09/98	05/06/98	31721	N/A	N/A	N/A	N/A	0.0000019	0.0000011
S-038	05/06/98	06/04/98	31773	N/A	N/A	N/A	N/A	0.0000002	0.0000008
S-038	06/04/98	07/02/98	22374	N/A	N/A	N/A	N/A	-0.0000010	0.0000017
S-038	07/02/98	08/06/98	26662	N/A	N/A	N/A	N/A	-0.0000003	0.0000014

a Sample volumes are not corrected for temperature

N/A Not applicable

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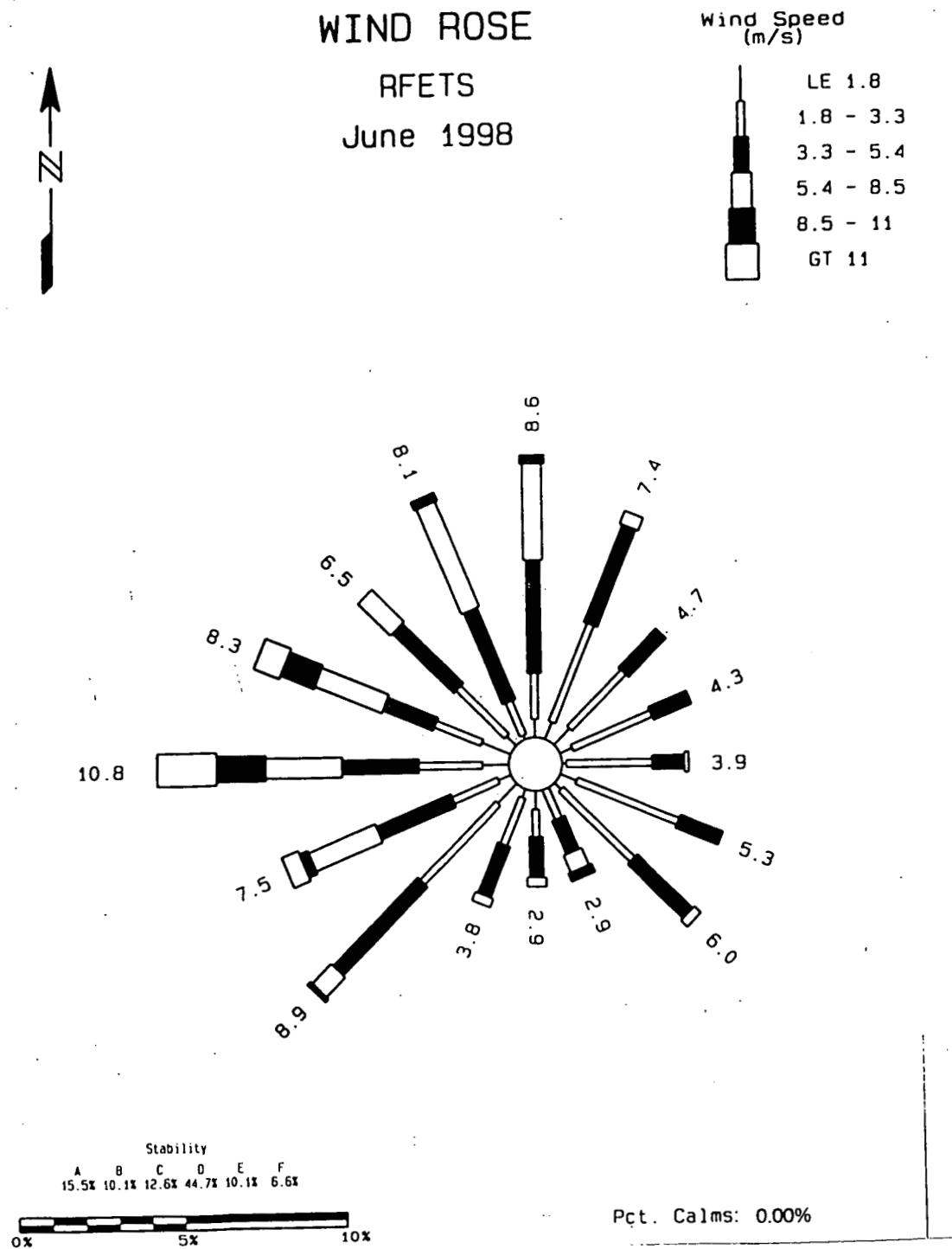
2. METEOROLOGY AND CLIMATOLOGY DATA

Table 2-1. Climatic Summary for June 1998

Date	Temp-High (°F)	Temp-Low (°F)	Temp-Mean (°F)	Dew Point (°F)	Humidity (%)	Wind Speed Mean (mph)	Wind Speed Peak (mph)	Pressure (mb)	Solar (kW-h/m ²)	Precip. Total (in.)	Precip. Peak (in.)
06/01/98	84.36	58.15	73.27	22.66	19	16.87	59.56	810.76	9	0	0
06/02/98	80.89	52.05	68.16	32.9	30.7	10.93	25.87	811.29	8.48	0	0
06/03/98	52.25	37.42	42.37	40.32	90.11	5.85	17.67	811.52	1.43	0	0
06/04/98	46.56	34.65	40.06	40.73	99.13	8.92	23.88	809.54	2.02	0.31	0.06
06/05/98	41.94	31.39	36.55	35.82	96.15	5.58	12.84	815.42	2	0.13	0.02
06/06/98	65.05	38.21	52.77	37.72	66.08	5.38	23.56	816.02	7.48	0	0
06/07/98	67.8	47.48	57.04	45.1	68.63	8.42	25.36	808.13	6.89	0	0
06/08/98	60.6	43.93	50.52	46.56	86.89	7.95	29.14	809.48	4.5	0.13	0.03
06/09/98	62.74	45.03	53.42	47.7	83.43	6.16	18.82	812.22	5.84	0	0
06/10/98	65.39	45.3	55.49	47.19	76.83	6.45	22.62	809.98	5.54	0.12	0.08
06/11/98	72.16	48.54	61.77	36.18	43.22	12.28	38.19	808.92	7.93	0.01	0.01
06/12/98	75.87	50.49	64.98	38.71	43.93	7.8	26.72	813.66	7.61	0	0
06/13/98	70.74	53.46	61.52	36.52	43.57	15.97	64.29	809.24	6.66	0	0
06/14/98	69.55	43.68	57.16	39.15	55.26	10.42	45.56	812.12	4.49	0.16	0.11
06/15/98	67.17	41.11	55.22	40.01	63.16	7.06	27.89	811.44	6.95	0.02	0.02
06/16/98	67.3	48.69	57.58	43.32	63.05	7.8	24.93	805.06	4.62	0	0
06/17/98	61.09	46.45	51.53	41.22	69.66	6.65	32.1	807	4.04	0	0
06/18/98	68.52	48.49	60.01	31.75	35.67	18.84	52.93	812.86	8.07	0	0
06/19/98	84.99	54.77	70.86	30.88	26.69	10.46	25.24	811.73	8.93	0	0
06/20/98	78.33	53.74	64.89	39.83	45.15	9.86	26.84	812.53	6.81	0	0
06/21/98	71.29	52.75	60.12	47.68	67.61	8.29	42.83	815.23	4.97	0.04	0.03
06/22/98	79.23	52.57	65.48	48.11	60.52	7.03	29.99	814.7	6.77	0.12	0.06
06/23/98	80.71	54.36	68.5	40.71	47.82	8.11	26.19	810.99	8.53	0	0
06/24/98	85.98	56.86	72.05	20.28	20.67	10.66	37.77	809.74	8.88	0	0
06/25/98	87.48	57.45	72.75	29.68	23.89	6.9	29.03	810.96	8.79	0	0
06/26/98	89.62	66.78	78.89	24.84	15.62	9.45	32.1	809.7	8.91	0	0
06/27/98	86.05	60.64	72.3	40.24	35.1	7.68	20.61	813.79	8.6	0	0
06/28/98	89.37	58.12	73.29	41.04	35.94	6.65	16.93	815.95	8.58	0	0
06/29/98	87.94	64.89	77.29	40.53	31.42	6.99	20.61	816.5	8.65	0	0
06/30/98	79.63	59.13	68.99	51.3	56.14	7.59	22.2	818.03	6.92	0.02	0.02
Summary	72.69	50.22	61.49	38.62	53.37	8.97	64.29	811.82	198.89	1.06	0.11

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Figure 2-1. Windrose for Rocky Flats Environmental Technology Site for June 1998



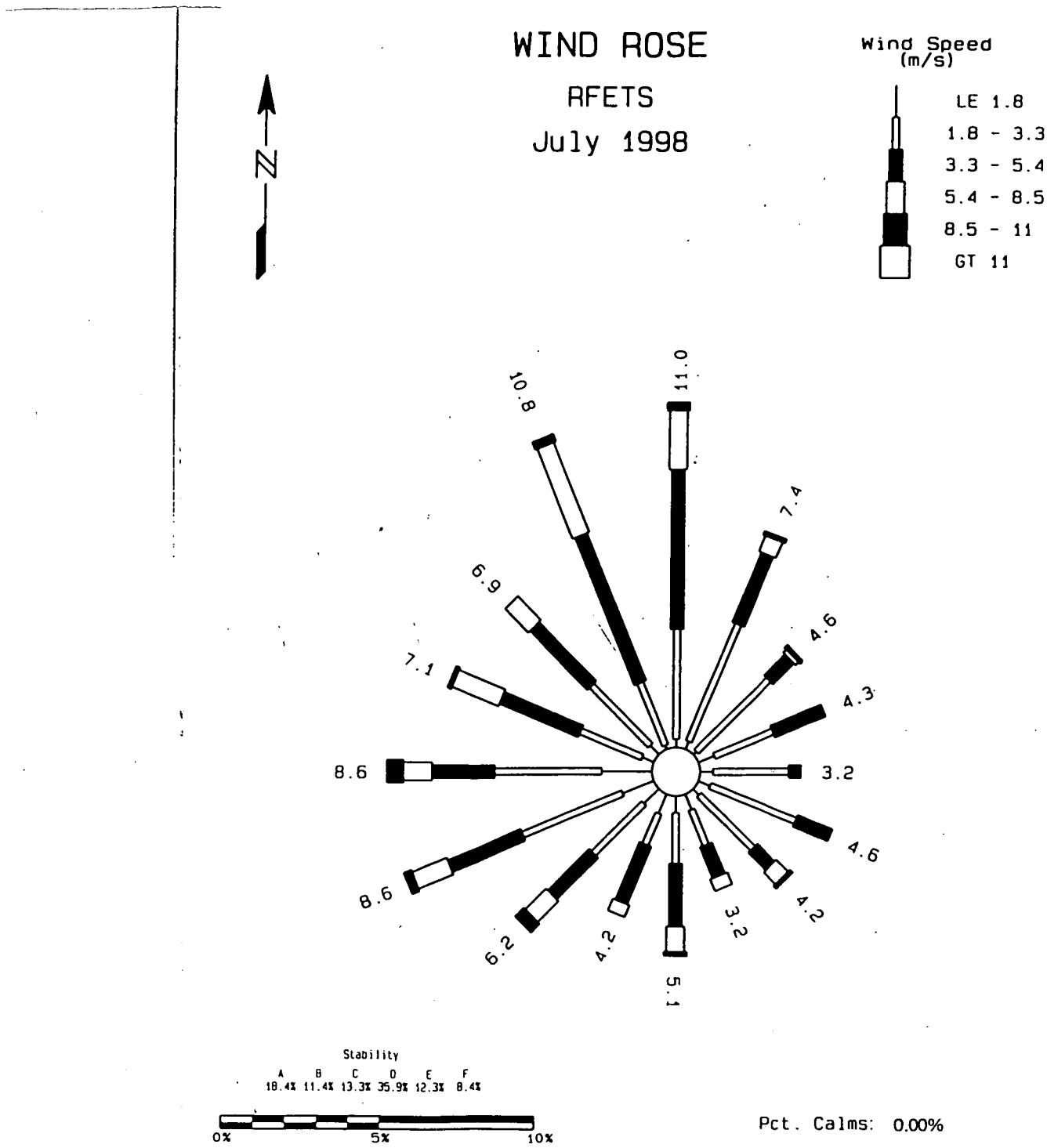
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Table 2-2. Climatic Summary for July 1998

Date	Temp-High (°F)	Temp-Low (°F)	Temp-Mean (°F)	Dew Point (°F)	Humidty (%)	Wind Speed Mean (mph)	Wind Speed Peak (mph)	Pressure (mb)	Solar (kW-h/m²)	Precip. Total (in.)	Precip. Peak (in.)
07/01/98	81.01	56.52	68.77	55.2	64.41	10.15	29.77	816.58	7.42	0	0
07/02/98	85.41	59.47	72.36	53.08	57.14	6.79	26.72	814.79	7.34	0	0
07/03/98	76.24	58.86	67.96	49.62	54.89	8.71	34.52	817.48	5.06	0	0
07/04/98	78.62	57.9	67.96	50.79	58.39	6.94	31.05	817.23	4.78	0	0
07/05/98	91.02	59.7	77.11	43.97	39.31	6.27	17.56	816.41	6.54	0	0
07/06/98	77.09	60.39	70.97	50.7	52.38	8.96	34.52	818.05	2.93	0.04	0.02
07/07/98	81.73	60.71	71.53	48.56	48.32	7.68	24.39	818.76	5.36	0	0
07/08/98	79.3	56.37	66.24	55.44	71.43	7.88	24.73	818.64	5.81	0.11	0.03
07/09/98	78.39	59.09	64.85	58.19	82.14	6.65	28.52	818.46	4.43	0.12	0.02
07/10/98	80.51	57.92	67.96	55.85	71.09	5.94	20.83	818.04	5.83	0	0
07/11/98	90.16	62.13	76.12	42.3	35.77	9.63	38.82	817.35	8.3	0	0
07/12/98	91.96	67.19	80.38	36.82	25.67	8.15	27.24	817.28	7.85	0	0
07/13/98	95.02	67.14	82.09	30.52	19.82	7.91	23.77	815.96	8.45	0	0
07/14/98	94.41	69.15	78.82	37.06	24.43	7.84	57.97	816.06	7.07	0.01	0.01
07/15/98	86.41	60.1	72.91	43.09	37.38	9	33.47	820.64	7.49	0	0
07/16/98	83.37	56.95	70.36	47.98	51.83	8.22	25.98	821.62	8.32	0	0
07/17/98	89.71	66.51	79.36	40.64	29.74	7.44	22.4	820.09	8.35	0	0
07/18/98	97.16	71.51	83.82	36.66	21.66	7.91	19.24	816.09	8.3	0	0
07/19/98	97.43	73	85.3	34.27	17.21	9.68	78.29	815.54	6.65	0	0
07/20/98	97.66	71.42	85.15	33.82	17.7	7.93	30.4	815.33	7.72	0	0
07/21/98	87.51	61.99	74.52	46.65	42.16	8.51	26.3	816.97	5.65	0.02	0.01
07/22/98	73.47	59	63.09	58.78	86.73	6.63	21.03	819.14	2.92	0.32	0.09
07/23/98	71.1	58.41	62.73	59.59	89.98	5.76	17.67	817.7	3.03	0.18	0.05
07/24/98	74.64	59.4	64.92	60.4	86.47	6.65	23.34	817.84	4.48	0.12	0.09
07/25/98	79.86	58.3	64.51	59.86	86.97	6.12	39.13	818.05	4.51	0.29	0.12
07/26/98	77.13	59.85	67.77	58.55	76.31	5.33	19.78	820.96	6.84	0	0
07/27/98	81.75	60.69	70.32	54.32	63.64	5.11	15.34	820.43	5.33	0	0
07/28/98	80.6	60.57	68.79	55.04	64.08	7.15	23.77	817.87	4.93	0.01	0.01
07/29/98	82.22	61	67.78	55.09	68.03	8.36	32.93	816	5.91	0	0
07/30/98	65.61	56.52	60.17	58.21	93.03	6.38	24.19	818.8	1.38	0.45	0.14
07/31/98	71.91	55.13	62.47	56.05	81.59	7.01	35.24	818.64	4.82	0.01	0.01
Summary	83.17	61.38	71.52	49.26	55.47	7.51	78.29	817.83	183.8	1.68	0.14

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Figure 2-2. Windrose for Rocky Flats Environmental Technology Site for July 1998



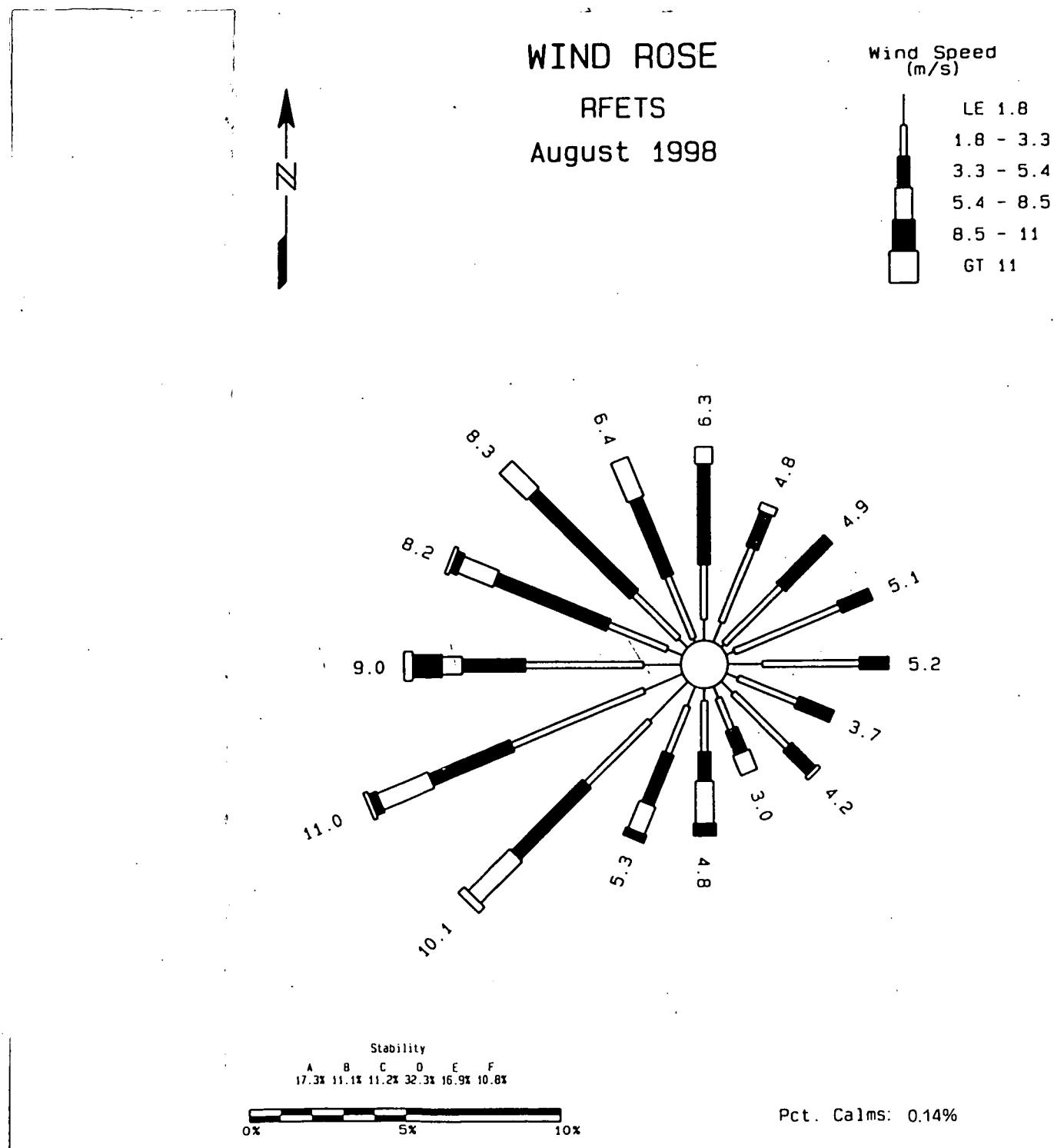
Rocky Flats Environmental Technology Site
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Table 2-3. Climatic Summary for August 1998

Date	Temp-High (°F)	Temp-Low (°F)	Temp-Mean (°F)	Dew Point (°F)	Humidity (%)	Wind Speed Mean (mph)	Wind Speed Peak (mph)	Pressure (mb)	Solar (kW-h/m ²)	Precip. Total (in.)	Precip. Peak (in.)
08/01/98	77.54	56.55	65.97	51.78	63.35	9.56	56.09	818.84	3.9	0.09	0.02
08/02/98	78.44	57.07	69.42	42.69	42.16	7.8	27.98	819.6	6.06	0	0
08/03/98	72.54	53.67	61.84	52.84	76.82	6.9	29.66	821.17	3.77	0.13	0.06
08/04/98	67.33	55.11	58.14	55.27	90.74	6.45	31.88	822.83	3.44	0.45	0.16
08/05/98	73.58	53.37	63.46	53.6	74.82	5.24	15.99	823.02	6.52	0	0
08/06/98	79.79	54	68.4	50.88	63.01	5.31	16.93	819.01	7.89	0	0
08/07/98	83.77	59.4	71.92	47.64	51.6	5.4	19.98	816.12	7.79	0	0
08/08/98	89.44	64.31	75.56	46.69	42.53	7.44	31.88	817.27	6.56	0.02	0.01
08/09/98	73.98	60.89	67.8	53.94	64.37	6.38	18.19	820.84	3.16	0.02	0.01
08/10/98	77.27	57.83	63.77	52.39	66.78	7.5	35.88	820.07	4.49	0.02	0.01
08/11/98	78.01	60.85	67.91	50.58	58.2	6.54	22.83	820.23	5.05	0	0
08/12/98	79.5	61.63	71.17	44.26	44.32	7.53	22.31	821.97	6.54	0	0
08/13/98	80.49	59.11	71.94	42.85	42.15	6.27	22.71	822.21	7.48	0	0
08/14/98	81.52	59.52	71.56	43.61	41.27	8.09	41.98	818.86	4.74	0	0
08/15/98	82.15	55.89	68.13	49.8	55.27	8.33	32.19	815.21	5.91	0.01	0.01
08/16/98	81.48	65.52	72.66	45.95	42.12	8.47	37.77	814.99	4.5	0.05	0.02
08/17/98	85.03	62.06	74.28	44.4	36.31	10.26	44.31	816.35	6.8	0	0
08/18/98	83.25	63.54	71.91	47.61	45.7	8.85	52.62	816.07	5.24	0	0
08/19/98	80.4	60.39	70.63	48.69	50.96	6.88	24.51	819.09	5.62	0	0
08/20/98	79.25	59.86	68.52	51.93	58.95	6.34	16.08	821.32	6.12	0	0
08/21/98	79.97	61.36	70.14	50.76	54.12	5.62	22.62	819.88	4.72	0	0
08/22/98	84.69	63.23	73.98	45.59	41.03	7.41	22.71	818.58	6.27	0	0
08/23/98	88.03	66.81	78.55	43.38	31.68	9.65	24.73	815.26	6.95	0	0
08/24/98	84.54	60.3	74.46	46.92	42.08	10.04	35.66	814.43	4.6	0.03	0.01
08/25/98	76.51	58.39	66.81	51.28	61.04	6.76	23.77	815.94	2.9	0	0
08/26/98	82.72	56.52	70.48	50.68	53.68	7.37	18.41	814.19	5.79	0	0
08/27/98	80.96	62.56	71.6	42.51	38.29	9.65	44.4	818.8	4.16	0	0
08/28/98	80.74	56.79	70.23	32.25	30.22	6.43	21.66	823.04	7.25	0	0
08/29/98	85.68	65.34	74.91	36.34	29.74	5.91	16.51	820.89	7.04	0	0
08/30/98	88.43	68.49	78.44	34.14	24.31	6.65	22.31	817.32	6.56	0	0
08/31/98	74.86	59.83	68.09	45.63	48.71	8.78	30.08	819.52	4.48	0.1	0.02
Summary	80.38	60.01	70.09	47	50.53	7.41	56.09	818.8	172.3	0.92	0.16

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Figure 2-3. Windrose for Rocky Flats Environmental Technology Site for August 1998



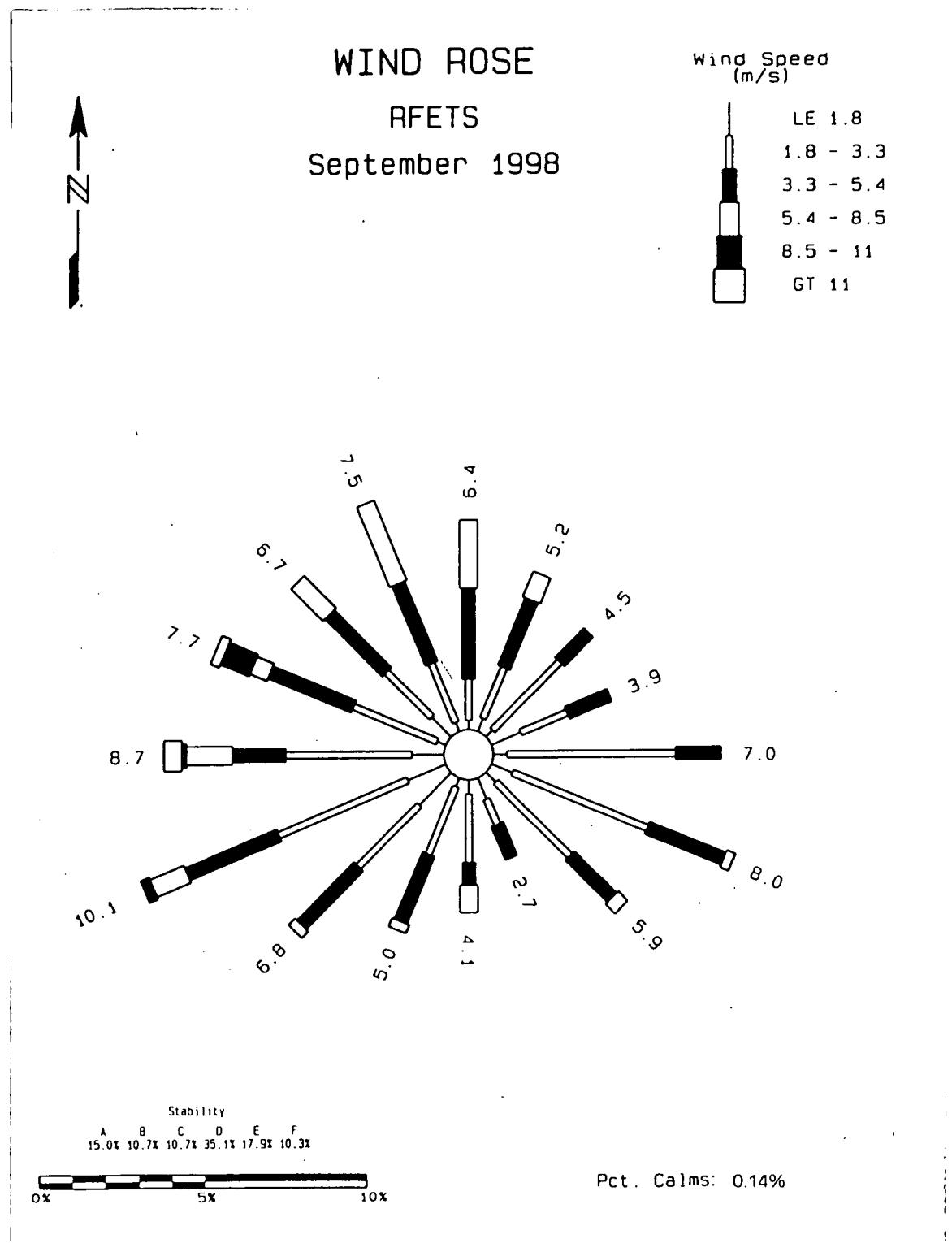
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Table 2-4. Climatic Summary for September 1998

Date	Temp-High (°F)	Temp-Low (°F)	Temp-Mean (°F)	Dew Point (°F)	Humidity (%)	Wind Speed Mean (mph)	Wind Speed Peak (mph)	Pressure (mb)	Solar (KW·h/m ²)	Precip. Total (in.)	Precip. Peak (in.)
09/01/98	71.04	54.9	63.86	47.57	60.79	7.59	21.57	819.05	4.11	0.08	0.02
09/02/98	79.9	58.03	70	43.18	44.73	6.18	20.61	815.65	6.87	0	0
09/03/98	85.95	66.54	77.41	33.48	23.84	8.15	20.09	815.49	6.95	0	0
09/04/98	89.13	66	77.32	36.12	29.3	6.38	24.82	816.41	6.93	0	0
09/05/98	88.25	64.76	77.04	37.02	28.53	5.91	17.25	816.44	6.7	0	0
09/06/98	86.94	65.16	78.01	35.96	26.17	7.71	21.46	817.48	6.74	0	0
09/07/98	79.99	56.46	68.54	51.78	58.96	5.98	19.24	818.27	6.5	0	0
09/08/98	83.64	58.3	70.63	50.07	55.73	6.7	43.88	814.52	6.25	0.14	0.14
09/09/98	85.23	62.82	73.99	44.53	41.91	7.19	18.73	813.64	5.89	0	0
09/10/98	85.69	66.22	75.74	38.89	31.48	7.26	23.34	814.67	6.33	0	0
09/11/98	81.48	66.11	73.2	42.62	37.52	8.96	27.89	816.19	6.23	0	0
09/12/98	74.01	58.3	65.55	50.04	62.7	7.21	29.99	814.22	3.69	0.11	0.02
09/13/98	71.29	55.22	61.7	47.93	65.72	6.79	25.56	812.97	4.47	0.02	0.02
09/14/98	69.87	51.49	61.3	46.58	63.14	5.6	21.03	817.26	5.18	0	0
09/15/98	73.99	53.51	63.99	46.49	58.55	6.16	15.46	819.53	6.05	0	0
09/16/98	77.02	53.82	65.82	41.65	48.36	6.16	25.04	818.04	5.38	0	0
09/17/98	80.8	58.93	70.65	36.25	34.02	6.88	18.61	816.82	6.01	0	0
09/18/98	82.94	62.01	74.41	32.4	24.31	8.13	28.72	812.52	5.2	0	0
09/19/98	77.07	56.21	68.7	35.53	32.53	10.19	27.98	809.46	6.04	0.05	0.03
09/20/98	68.2	49.57	58.19	44.71	64.27	10.28	25.98	811.11	5.27	0	0
09/21/98	50.52	42.4	44.46	45.14	99.98	8.65	23.68	814.39	0.67	0.03	0.01
09/22/98	61.02	42.75	50.67	46.31	86.41	4.48	14.29	816.92	4.2	0	0
09/23/98	66.9	45.79	57.54	48.45	76.28	5.56	28.94	815.41	3.67	0.07	0.04
09/24/98	75.4	50.2	63.1	44.11	59.72	7.35	15.57	813.02	5.7	0	0
09/25/98	79.09	52.68	67.57	35.98	36.7	10.39	37.25	806.79	5.68	0	0
09/26/98	73.2	54.91	64.02	28.96	28.78	9.92	29.46	811.99	5.81	0	0
09/27/98	71.91	49.78	61.39	35.15	42.73	6.54	18.41	817.64	5.73	0	0
09/28/98	79.34	54.82	68.34	29.25	29.75	5.49	17.76	816.23	4.36	0	0
09/29/98	76.48	59.41	67.23	38.35	37.76	10.06	50.51	815.28	2.99	0	0
09/30/98	64.26	48.56	56.19	42.66	61.13	9.3	26.41	817.42	4.24	0	0
Summary	76.35	56.19	66.55	41.24	48.39	7.44	50.51	815.16	159.84	0.5	0.14

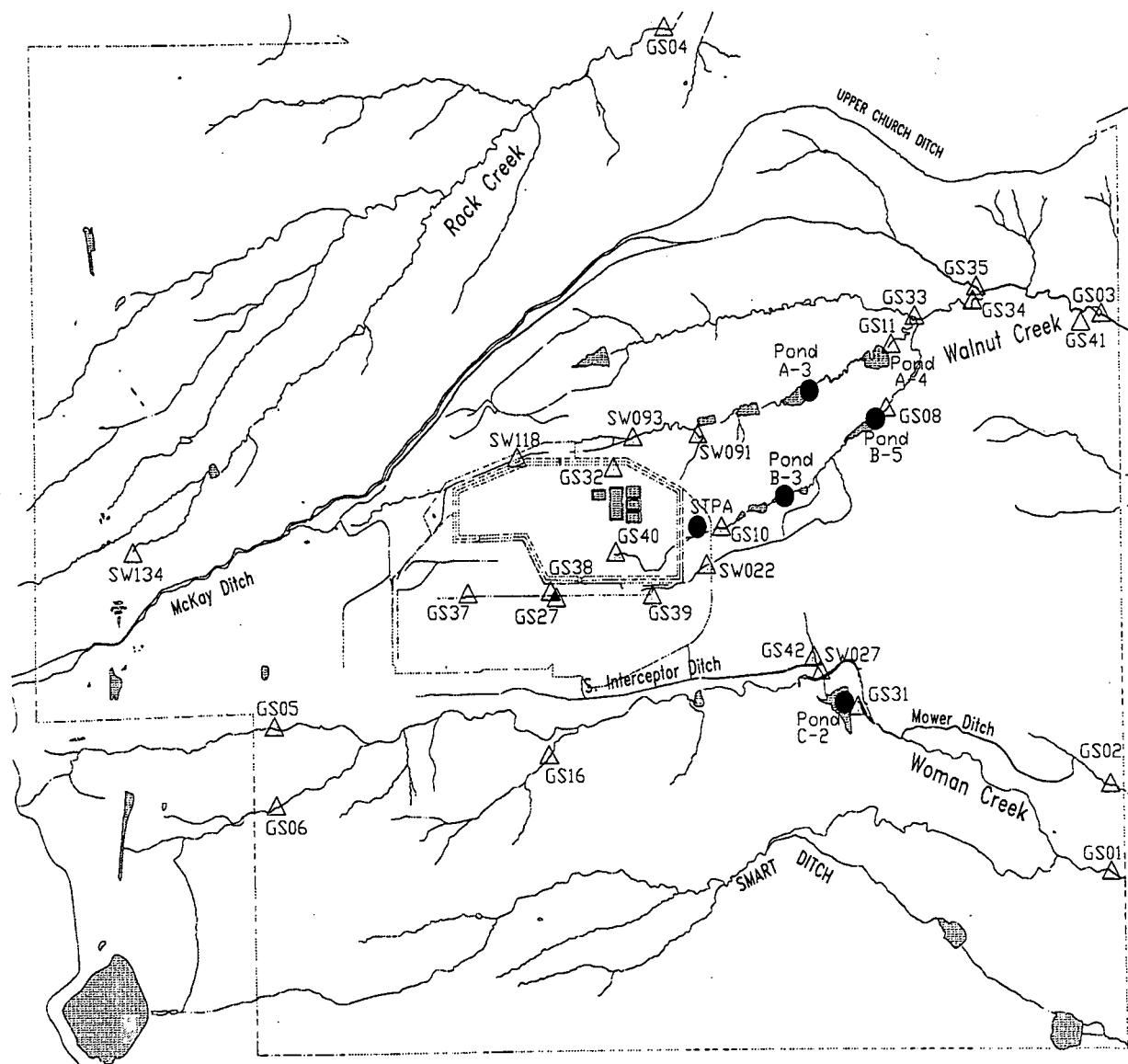
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Figure 2-4. Windrose for Rocky Flats Environmental Technology Site for September 1998



3. SURFACE WATER DATA

Map 3-1. Holding Ponds and Liquid Effluent Water Courses



△ Automated Surface-Water Monitoring Locations
● NPDES Permit Locations

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Table 3-1. Pond B-3 (Outfall 001A)

Dates of discharge 7/1/98 - 9/30/98

Parameter & Units	Measured 30-day Average	Limit 30-Day Average	Measured 7-Day Average	Limit 7-Day Average	Measured Daily Maximum	Limit Daily Maximum
NO ₃ /NO ₂ , mg/l	2.3 - 3.4	10	3.2 - 5.9	20	N/A	N/A
TRC, mg/l	N/A	N/A	N/A	N/A	0.03 - 0.06	0.5
BOD ₅ , mg/l	6 - 15	a	N/A	N/A	8 - 24	a
CBOD ₅ , mg/l	<2 - 4	a	N/A	N/A	<2 - 9	a
TSS, mg/l	<14	a	N/A	N/A	11 - 39	a

a Report Only

N/A Not Applicable

TRC Total Residual Chlorine

TSS Total Suspended Solids

BOD₅ Biochemical Oxygen Demand, 5-Day Test

CBOD₅ Carbonaceous Biochemical Oxygen Demand, 5-Day Test

Note: Results are the range of value measured during the reporting period

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Table 3-2. Sewage Treatment Plant (Outfall STP A)

Dates of discharge 7/1/98 – 9/30/98. Metals and VOA samples collected 7/7/98, 8/4/98, and 9/1/98

Parameter & Units	Measured 30-day Average	Limit 30-Day Average	Measured 7-Day Average	Limit 7-Day Average	Measured Daily Minimum	Limit Daily Minimum	Measured Daily Maximum	Limit Daily Maximum	Observed Sheen	Measured Result
pH, SU	N/A	N/A	N/A	N/A	6.7 - 6.8	6.0	7.4 - 7.5	9.0	N/A	N/A
TSS, mg/l	<5	30	<7	45	N/A	N/A	N/A	N/A	N/A	N/A
Total Phosphorus, mg/l	1 - 3	8	N/A	N/A	N/A	N/A	3 - 14	12	N/A	N/A
TRC, mg/l	<0.02	a	<0.03	a	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium, ug/l	<2	50	N/A	N/A	N/A	N/A	<3	100	N/A	N/A
Fecal Coliform, #/100ml	<8	200b	3 - 54	440b	N/A	N/A	N/A	N/A	N/A	N/A
CBOD5, mg/l	<2 - 3	10	N/A	N/A	N/A	N/A	6 - 9	25	N/A	N/A
Oil & Grease	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	c	N/A
WET										
Ceriodaphnia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>100	
Fathead Minnows	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>100	
Antimony, ug/l	0.4 - 0.7	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic, ug/l	0.5 - 4.8	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium, ug/l	<0.1	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium, ug/l	<0.1	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper, ug/l	2.0 - 4.6	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron, ug/l	9.3 - 228	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead, ug/l	0.3 - 0.4	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese, ug/l	19.4 - 25.0	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, ug/l	<0.1	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, ug/l	1.8 - 2.7	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silver, ug/l	<0.5	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc, ug/l	18.9 - 37.7	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOC's, ug/l	d	a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- a Report Only
 b Geometric
 c No Sheen Observed
 d None Detected Above PQL
 N/A Not Applicable
 TSS Total Suspended Solids
- TRC CBOD5
 PQL WET
 SU
- Total Residual Chlorine
 Carbonaceous Biochemical Oxygen Demand, 5-Day Test
 Practical Quantitation Limit
 Whole Effluent Toxicity
 Standard Units

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Table 3-3. Ponds – Interior and Terminal

Pond A-3 discharged 8/3/98 – 8/7/98; Pond A-4 discharged 8/26/98 – 9/8/98; Ponds B-5 and C-2 not discharged during reporting period.

Location, Parameter and Units	Measured 30-day Average	Limit 30-day Average	Measured 7-Day Average	Limit 7-Day Average	Measured Daily Minimum	Limit Daily Minimum	Measured Daily Maximum	Limit Daily Maximum	Measured Result
Pond A-3 (Outfall 002) pH, SU	N/A	N/A	N/A	N/A	6.0	7.4	9.0	7.6	N/A
NO ₃ /NO ₂ , mg/l	0.4	10	N/A	N/A	N/A	N/A	0.6	20	N/A
Pond A-4 (Outfall 005A) Total Chromium, ug/l	N/A	N/A	N/A	N/A	N/A	N/A	<3	50	N/A
WET									
Ceriodaphnia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>100
Fathead Minnows	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>100
Pond B-5 (Outfall 006A) Total Chromium, ug/l	N/A	N/A	N/A	N/A	N/A	N/A		50	N/A
WET									
Ceriodaphnia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fathead Minnows	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
NO ₃ /NO ₂ , mg/l*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pond C-2 (Outfall 007A) Total Chromium, ug/l	N/A	N/A	N/A	N/A	N/A	N/A		50	N/A
WET									
Ceriodaphnia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fathead Minnows	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

* Sample and analysis required only if Pond B-3 is bypassed

N/A Not applicable

SU Standard units

TRC Total residual chlorine

WET Whole Effluent Toxicity

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Table 3-4. Daily Transfer Flow Data Recorded for Pond B-5 to Pond A-4

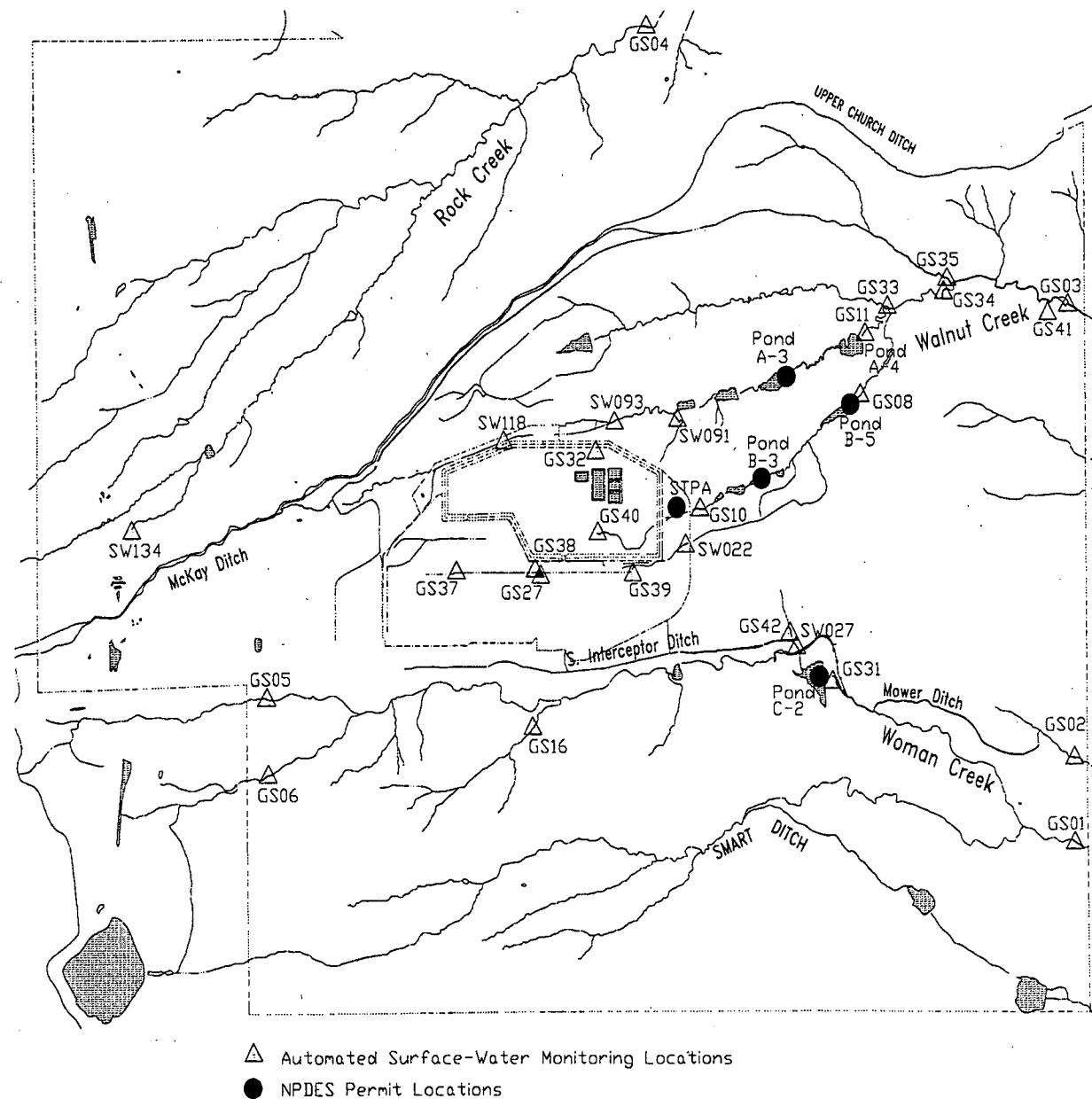
Date	Pond B-5 to Pond A-4 (gal)	Date	Pond B-5 to Pond A-4 (gal)	Date	Pond B-5 to Pond A-4 (gal)
07/01/98	No Transfer	08/01/98	No Transfer	09/01/98	No Transfer
07/02/98	No Transfer	08/02/98	No Transfer	09/02/98	No Transfer
07/03/98	No Transfer	08/03/98	875,000	09/03/98	No Transfer
07/04/98	No Transfer	08/04/98	1,248,000	09/04/98	No Transfer
07/05/98	No Transfer	08/05/98	1,455,000	09/05/98	No Transfer
07/06/98	1,063,000	08/06/98	1,387,000	09/06/98	No Transfer
07/07/98	1,430,000	08/07/98	1,318,000	09/07/98	No Transfer
07/08/98	1,306,000	08/08/98	1,251,000	09/08/98	No Transfer
07/09/98	908,000	08/09/98	893,000	09/09/98	No Transfer
07/10/98	865,000	08/10/98	No Transfer	09/10/98	No Transfer
07/11/98	800,000	08/11/98	No Transfer	09/11/98	No Transfer
07/12/98	478,000	08/12/98	No Transfer	09/12/98	No Transfer
07/13/98	No Transfer	08/13/98	No Transfer	09/13/98	No Transfer
07/14/98	No Transfer	08/14/98	No Transfer	09/14/98	710,000
07/15/98	No Transfer	08/15/98	No Transfer	09/15/98	1,290,000
07/16/98	No Transfer	08/16/98	No Transfer	09/16/98	1,200,000
07/17/98	No Transfer	08/17/98	No Transfer	09/17/98	1,180,000
07/18/98	No Transfer	08/18/98	No Transfer	09/18/98	1,180,000
07/19/98	No Transfer	08/19/98	No Transfer	09/19/98	1,140,000
07/20/98	No Transfer	08/20/98	No Transfer	09/20/98	800,000
07/21/98	No Transfer	08/21/98	No Transfer	09/21/98	No Transfer
07/22/98	No Transfer	08/22/98	No Transfer	09/22/98	No Transfer
07/23/98	No Transfer	08/23/98	No Transfer	09/23/98	No Transfer
07/24/98	No Transfer	08/24/98	No Transfer	09/24/98	No Transfer
07/25/98	No Transfer	08/25/98	No Transfer	09/25/98	No Transfer
07/26/98	No Transfer	08/26/98	No Transfer	09/26/98	No Transfer
07/27/98	No Transfer	08/27/98	No Transfer	09/27/98	No Transfer
07/28/98	No Transfer	08/28/98	No Transfer	09/28/98	No Transfer
07/29/98	No Transfer	08/29/98	No Transfer	09/29/98	No Transfer
07/30/98	No Transfer	08/30/98	No Transfer	09/30/98	No Transfer
07/31/98	No Transfer	08/31/98	No Transfer		
Total	6,850,000	Total	8,427,000	Total	7,500,000

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4. HYDROLOGIC AND ROCKY FLATS CLEAN-UP AGREEMENT (RFCA) DATA

Map 4-1. Gaging Station Locations



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4.1 FLOW MONITORING

Table 4-1. Gaging Station GS01: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000 ^a	0.000	0.000
2	0.000 ^a	0.000	0.000
3	0.000 ^a	0.000	0.000
4	0.000 ^a	0.000	0.000
5	0.000 ^a	0.000	0.000
6	0.000 ^a	0.000	0.000
7	0.000 ^a	0.000	0.000
8	0.000 ^a	0.000	0.000
9	0.000 ^a	0.000	0.000
10	0.000 ^a	0.000	0.000
11	0.000 ^a	0.000	0.000
12	0.000 ^a	0.000	0.000
13	0.000 ^a	0.000	0.000
14	0.000 ^a	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31	0.000	0.000	NA
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

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Gaging Station GS01 is located at 39° 52' 40"N, 105° 09' 55"W, at Woman Creek and Indiana Street (See Section 4 Map). This station is a RFCA Point of Compliance, a Buffer Zone Monitoring Location and a monitoring point for water leaving the Site and flowing to Woman Creek Reservoir. This station collects samples for selected radionuclides using continuous flow-paced sampling and storm event sampling for selected water quality parameters, metals, and major ions.

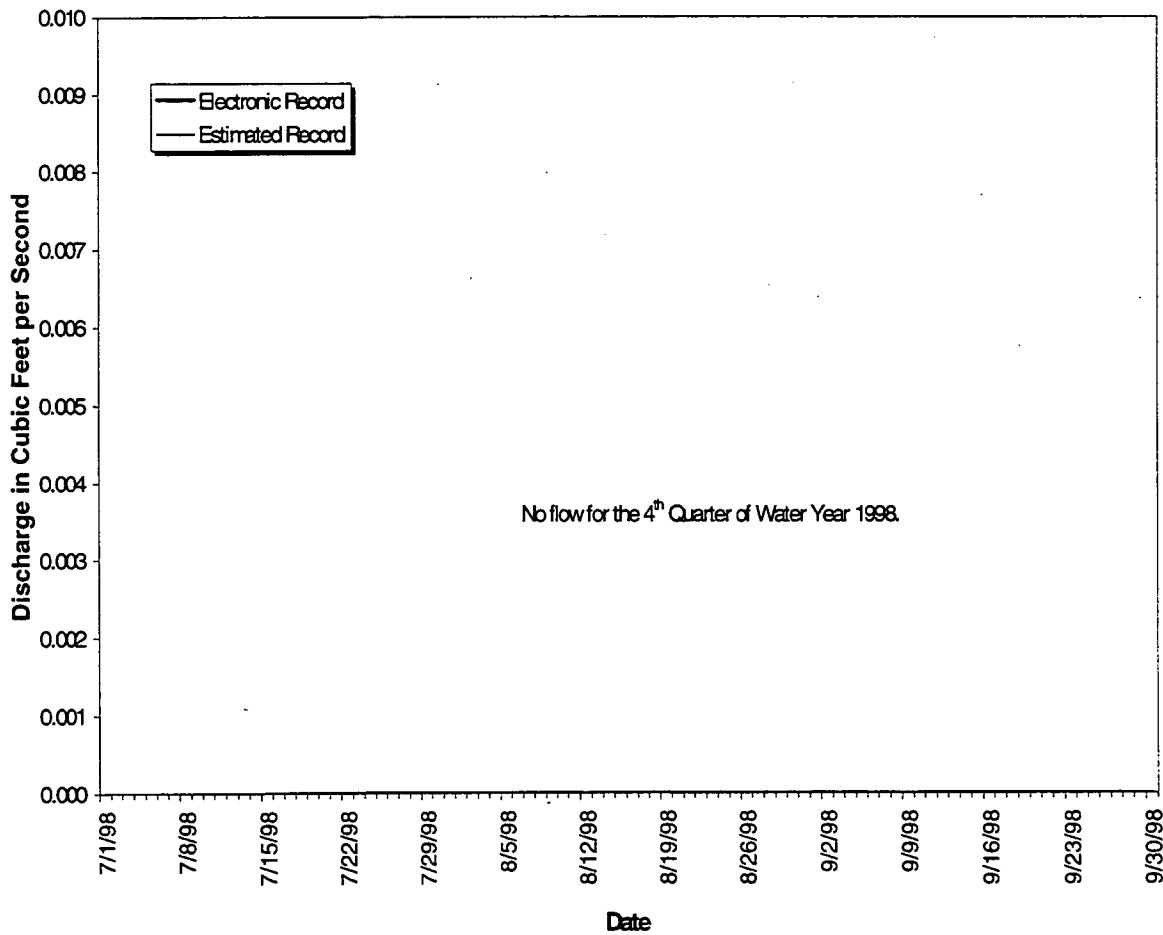


Figure 4-1. Mean Daily Discharge at GS01, Water Year 1998 (July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-2. Gaging Station GS02: Mean Daily Discharge (cubic feet per second)

Day	July 98	August 98	September 98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31			
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
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Gaging Station GS02 is located at 39° 52' 53"N and 105° 9' 55"W, at Mower Ditch and Indiana Street (See Section 4 Map). This station is a Buffer Zone Monitoring Location and is a monitoring point for water leaving the Site and flowing to Mower Reservoir. Storm event samples are collected for selected water quality parameters, metals, and major ions.

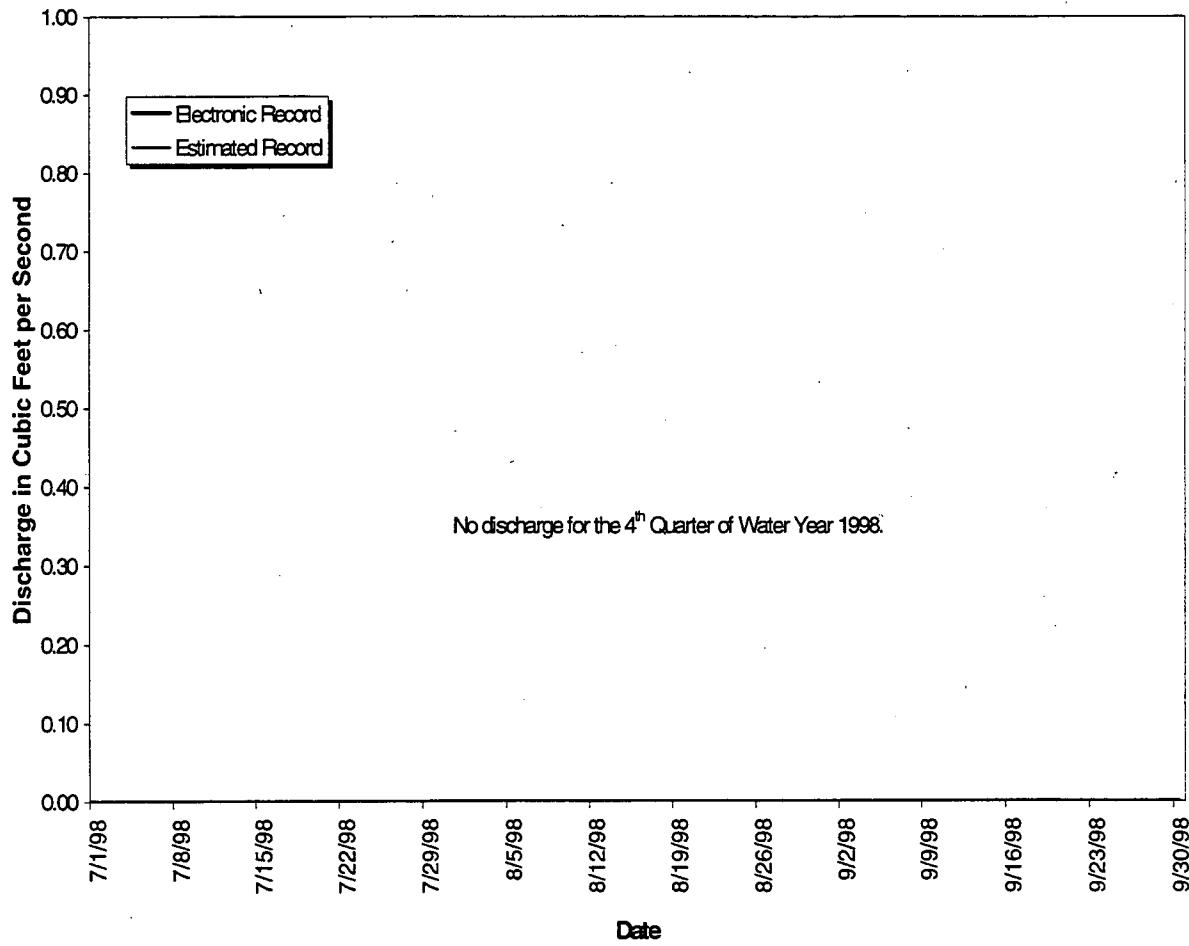


Figure 4-2. Mean Daily Discharge at Gaging Station GS02, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Table 4-3. Gaging Station GS03: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	1.781
2	0.000	0.000	1.615
3	0.000	0.000	1.253
4	0.000	0.000	0.773
5	0.000	0.000	0.641
6	0.000	0.000	0.498
7	0.000	0.000	0.399
8	0.000	0.000	0.450
9	0.000	0.000	0.009
10	0.000	0.000	0.001
11	0.000	0.000	0.001
12	0.000	0.000	0.002
13	0.000	0.000	0.003
14	0.000	0.000	0.002
15	0.000	0.000	0.001
16	0.000	0.000	0.001
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.002
23	0.000	0.000	0.001
24	0.000	0.000	0.001
25	0.000	0.000	0.000
26	0.000	0.944	0.000
27	0.000	3.141	0.000
28	0.000	2.997	0.000
29	0.000	2.763	0.000
30	0.000	2.556	0.000
31	0.000	2.138	NA
Monthly Average (cfs)	0.000	0.469	0.248

Monthly Discharge

Cubic Feet	0	1256131	642241
Gallons	0	9396511	4804298
Acre-Feet	0.00	28.83	14.74

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Gaging Station GS03 is located at 39° 54' 7"N, 105° 9' 59"W, at Walnut Creek and Indiana Street (See Section 4 Map). This station is a RFCA Point of Compliance, a Buffer Zone Monitoring Location and a monitoring point for water leaving the Site and flowing to the Broomfield Diversion Ditch. This station collects samples for selected radionuclides using continuous flow-paced sampling and storm event sampling for selected water quality parameters, metals, and major ions.

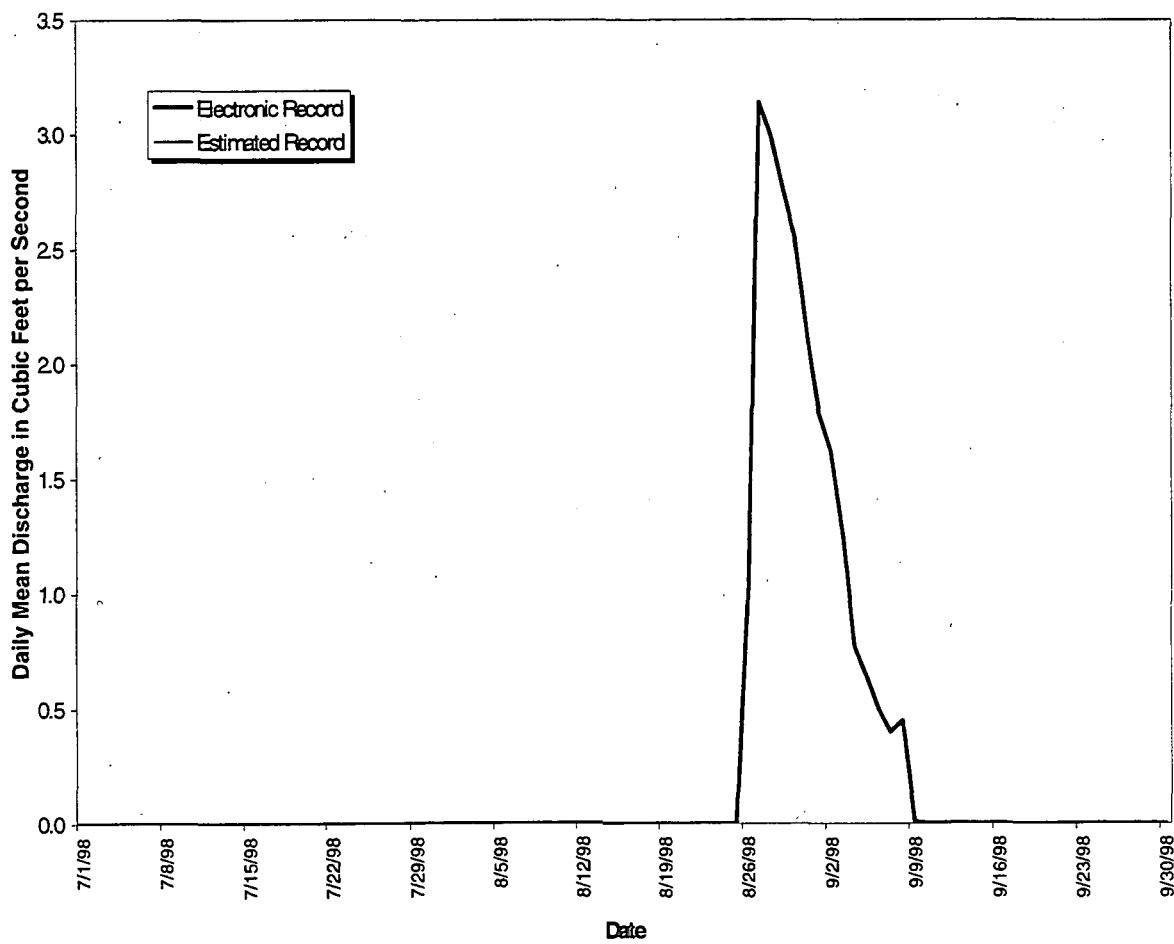


Figure 4-3. Mean Daily Discharge at Gaging Station GS03, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-4. Gaging Station GS04: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.053	0.164	0.000
2	0.034 ^a	0.136	0.000
3	0.017 ^a	0.107	0.000
4	0.005 ^a	0.421	0.000
5	0.000 ^a	0.430	0.000
6	0.000 ^a	0.199	0.000
7	0.000 ^a	0.127	0.000
8	0.000 ^a	0.086	0.000
9	0.000 ^a	0.064	0.000
10	0.000 ^a	0.056	0.000
11	0.000 ^a	0.049	0.000
12	0.000 ^a	0.057	0.000
13	0.000 ^a	0.045	0.000
14	0.000 ^a	0.037 ^a	0.000
15	0.000 ^a	0.023 ^a	0.000
16	0.000 ^a	0.010 ^a	0.000
17	0.000	0.002 ^a	0.000
18	0.000	0.000 ^a	0.000
19	0.000	0.000 ^a	0.000
20	0.000	0.000 ^a	0.000
21	0.000	0.000 ^a	0.000
22	0.000	0.000 ^a	0.000
23	0.000	0.000 ^a	0.000
24	0.000	0.000 ^a	0.000
25	0.032	0.000 ^a	0.000
26	0.100 ^a	0.000 ^a	0.000
27	0.004 ^a	0.000 ^a	0.000
28	0.000 ^a	0.000 ^a	0.000
29	0.000 ^a	0.000	0.000
30	0.191 ^v	0.000	0.000
31	0.291	0.000	NA
Monthly Average (cfs)	0.023	0.065	0.000

Monthly Discharge

Cubic Feet	62801	174071	0
Gallons	469787	1302141	0
Acre-Feet	1.44	4.00	0.00

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
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Gaging Station GS04 is located 39° 54' 57"N, 105° 11' 37"W, at Rock Creek and Highway 128 (See Section 4 Map). This station is a Buffer Zone Monitoring Location and is a monitoring point for water leaving the Site through the Rock Creek drainage flowing to Coal Creek. Storm event samples are collected for selected water parameters, metals, and major ions.

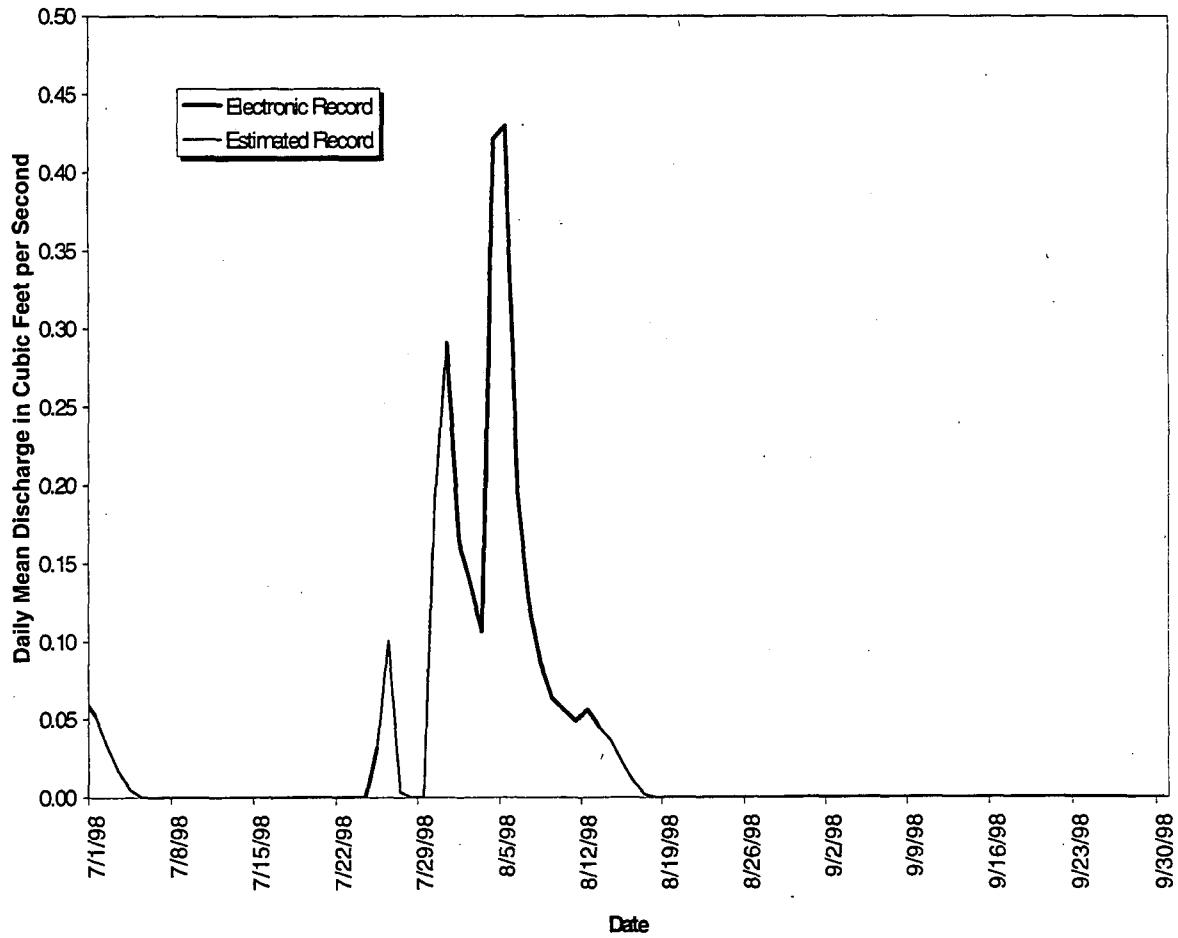


Figure 4-4. Mean Daily Discharge at Gaging Station GS04, Water Year 1998 (July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-5. Gaging Station GS05: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.063	0.045	0.095
2	0.056	0.038	0.063
3	0.046	0.065	0.089
4	0.047	0.113	0.146
5	0.041	0.077	0.097
6	0.042	0.057	0.096
7	0.046	0.034	0.088
8	0.059	0.034	0.059
9	0.061	0.044	0.054
10	0.028	0.084	0.049
11	0.022	0.062	0.043
12	0.018	0.058	0.052
13	0.016	0.058	0.051
14	0.038	0.070	0.043
15	0.038	0.082	0.040
16	0.046	0.080	0.039
17	0.026	0.073	0.032
18	0.032	0.072	0.030
19	0.049	0.030	0.032
20	0.044	0.053	0.040
21	0.047	0.066	0.061
22	0.076	0.070	0.059
23	0.063	0.055	0.057
24	0.040	0.025	0.051
25	0.047	0.024	0.028
26	0.037	0.035	0.026
27	0.030	0.108	0.034
28	0.030	0.059	0.035
29	0.030	0.065	0.038
30	0.080	0.066	0.041
31	0.044	0.100	NA
Monthly Average (cfs)	0.043	0.061	0.056

Monthly Discharge

Cubic Feet	115943	164504	144059
Gallons	867314	1230574	1077640
Acre-Feet	2.66	3.78	3.31

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

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Gaging Station GS05 is located 39° 53' 6"N, 105° 13' 17"W, at Kinnear Ditch and North Woman Creek (See Section 4 Map). This station is a Buffer Zone Monitoring Location and is a monitoring point for water entering North Woman Creek. Storm event samples are collected for selected water quality parameters, metals, and major ions.

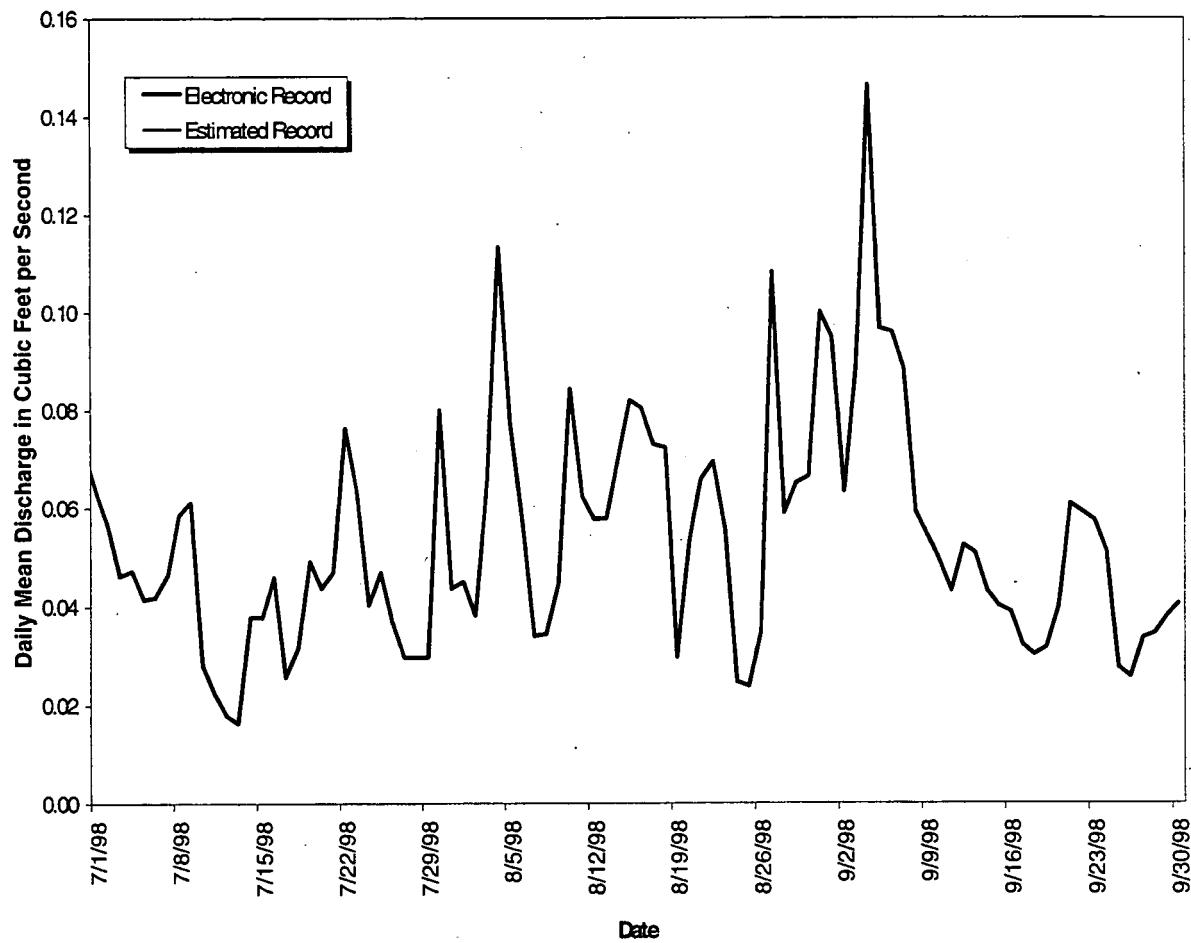


Figure 4-5. Mean Daily Discharge at Gaging Station GS05, Water Year 1998
(July, August, and September)

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Table 4-6. Gaging Station GS06: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.092	0.005	0.001
2	0.109	0.004	0.001
3	0.115	0.005	0.001
4	0.114	0.020	0.001
5	0.106	0.008	0.001
6	0.109	0.003	0.001
7	0.099	0.005	0.001
8	0.105	0.008	0.001
9	0.115	0.007	0.001
10	0.109	0.007	0.001
11	0.103	0.005	0.002
12	0.088	0.004	0.003
13	0.090	0.003	0.003
14	0.091	0.003	0.003
15	0.013	0.003	0.003
16	0.009	0.002	0.003
17	0.006	0.002	0.003
18	0.005	0.002	0.003
19	0.004	0.002	0.004
20	0.003	0.002	0.006
21	0.004	0.002	0.006
22	0.006	0.002	0.006
23	0.009	0.002	0.005
24	0.010	0.003	0.004
25	0.014	0.003	0.003
26	0.010	0.003	0.002
27	0.011	0.003	0.002
28	0.012	0.003	0.002
29	0.010	0.003	0.002
30	0.022	0.003	0.002
31	0.007	0.007	NA
Monthly Average (cfs)	0.052	0.004	0.003

Monthly Discharge

Cubic Feet	138357	11407	7004
Gallons	1034985	85334	52391
Acre-Feet	3.18	0.26	0.16

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

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Gaging Station GS06 is located $39^{\circ} 52' 53''N$, $105^{\circ} 13' 17''W$, on South Woman Creek (See Section 4 Map). This station is a Buffer Zone Monitoring Location and is a monitoring point for water entering South Woman Creek. Storm event samples are collected for selected water quality parameters, metals, and major ions.

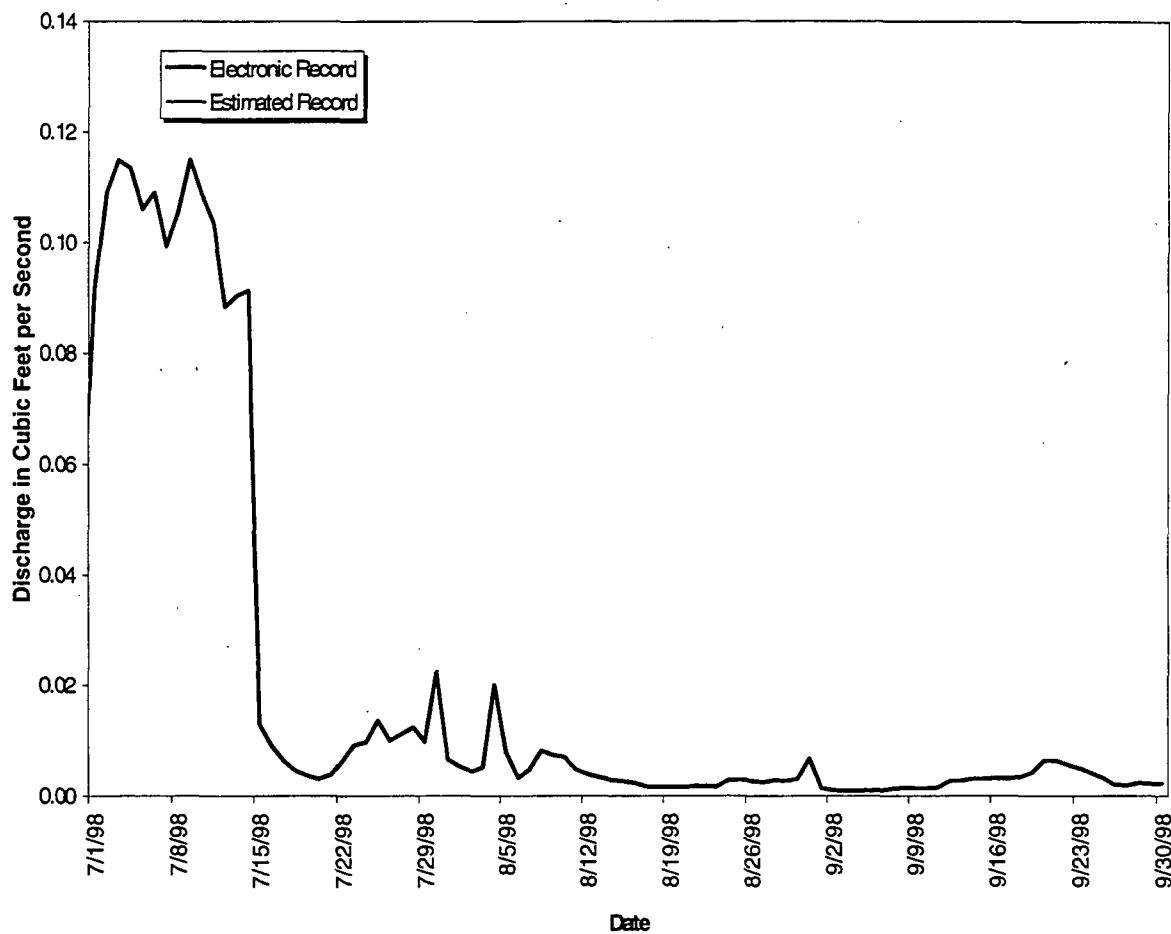


Figure 4-6. Mean Daily Discharge at Gaging Station GS06, Water Year 1998
(July, August, and September)

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Table 4-7. Gaging Station GS08: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31	0.000	0.000	NA
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Gaging Station GS08 is located 39° 53' 54"N, 105° 10' 48"W, at the Pond B-5 Outfall on South Walnut Creek (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond B-5 to South Walnut Creek. This station collects samples for selected radionuclides using continuous flow-paced sampling.

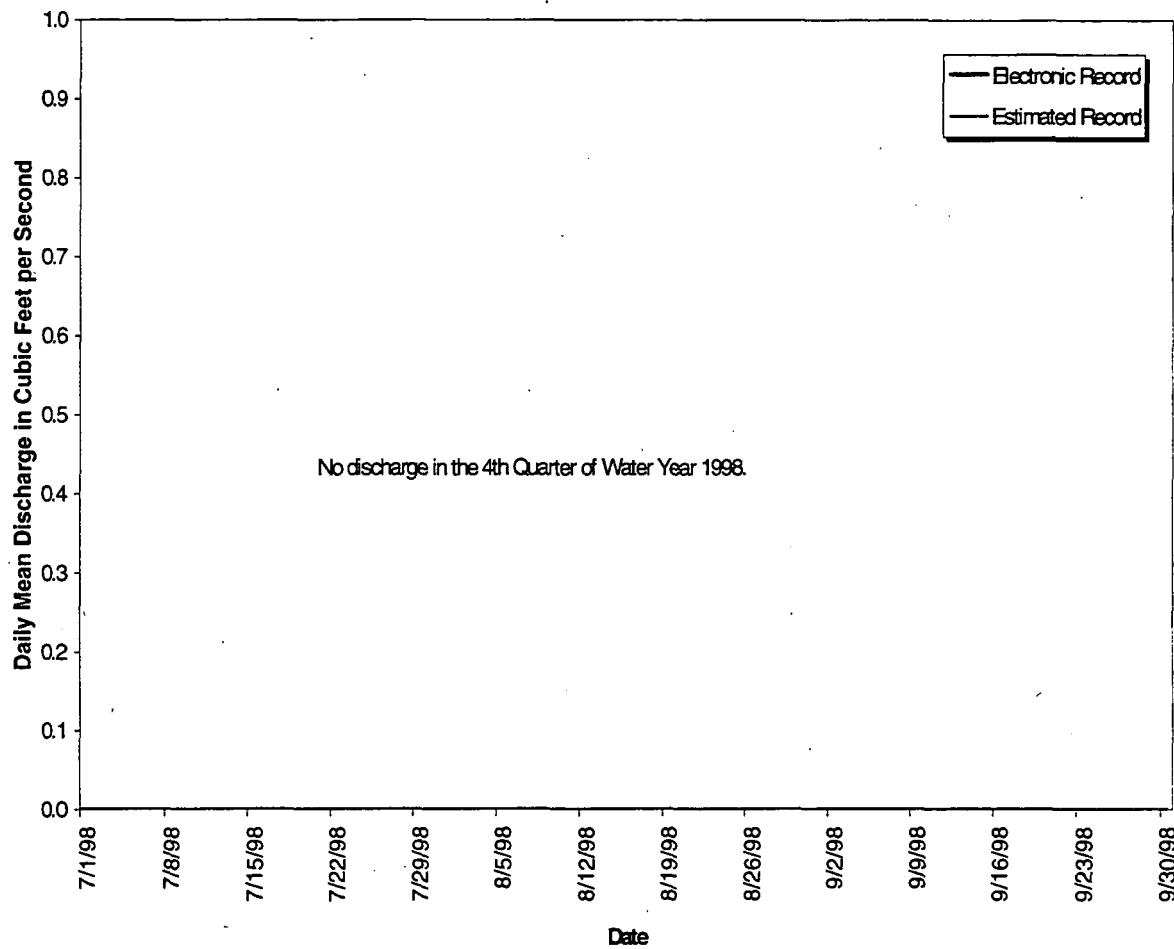


Figure 4-7. Mean Daily Discharge at Gaging Station GS08, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-8. Gaging Station GS10: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.056	0.094	0.101
2	0.057	0.070	0.051
3	0.055	0.108	0.049
4	0.056	1.329	0.050
5	0.053	0.116	0.052
6	0.063	0.073	0.044
7	0.057	0.064	0.044
8	0.087	0.060	0.045
9	0.147	0.064	0.045
10	0.069	0.087	0.046
11	0.056	0.070	0.048
12	0.053	0.059	0.105
13	0.052	0.053	0.068
14	0.048	0.052	0.066
15	0.046	0.050	0.062
16	0.047	0.051	0.065
17	0.046	0.049	0.070
18	0.045	0.051	0.077
19	0.045	0.055	0.084
20	0.043	0.058	0.066
21	0.048	0.061	0.095
22	0.328	0.060	0.071
23	0.219	0.063	0.072
24	0.110	0.069	0.064
25	0.805 ^a	0.064	0.055
26	0.095	0.067	0.052
27	0.070	0.062	0.053
28	0.069	0.060	0.056
29	0.067	0.057	0.059
30	0.598	0.058	0.061
31	0.095	0.143	NA
Monthly Average (cfs)	0.119	0.109	0.062

Monthly Discharge

Cubic Feet	318430	291997	161879
Gallons	2382024	2184290	1210942
Acre-Feet	7.31	6.70	3.72

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

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Gaging Station GS10 is located $39^{\circ} 53' 35''\text{N}$, $105^{\circ} 11' 27''\text{W}$ on South Walnut Creek above the Pond B-1 Bypass (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water leaving the Site Industrial Area and entering the B-Series Ponds and South Walnut Creek. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

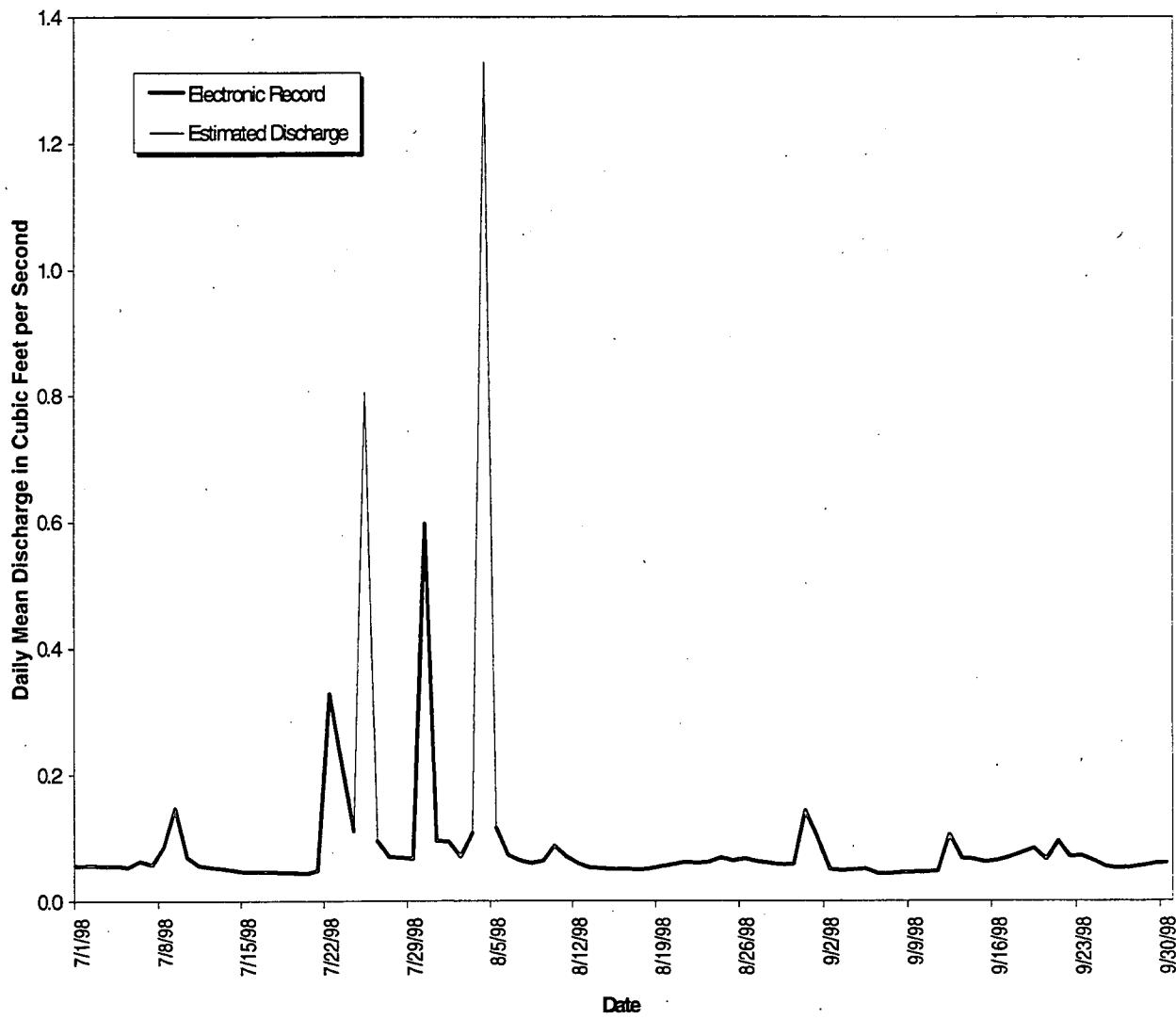


Figure 4-8. Mean Daily Discharge at Gaging Station GS10, Water Year 1998 (July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-9. Gaging Station GS11: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	1.913
2	0.000	0.000	1.751
3	0.000	0.000	1.288
4	0.000	0.000	0.819
5	0.000	0.000	0.667
6	0.000	0.000	0.533
7	0.000	0.000	0.432
8	0.000	0.000	0.425
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	2.148	0.000
27	0.000	3.536	0.000
28	0.000	3.222	0.000
29	0.000	2.956	0.000
30	0.000	2.712	0.000
31	0.000	2.218	NA
Monthly Average (cfs)	0.000	0.542	0.261

Monthly Discharge

Cubic Feet	0	1450850	676194
Gallons	0	10853112	5058286
Acre-Feet	0.00	33.30	15.52

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Gaging Station GS11 is located 39° 54' 3"N, 105° 10' 47"W, at the Pond A-4 Outfall on North Walnut Creek (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond A-4 to North Walnut Creek. This station collects samples for selected radionuclides using continuous flow-paced sampling.

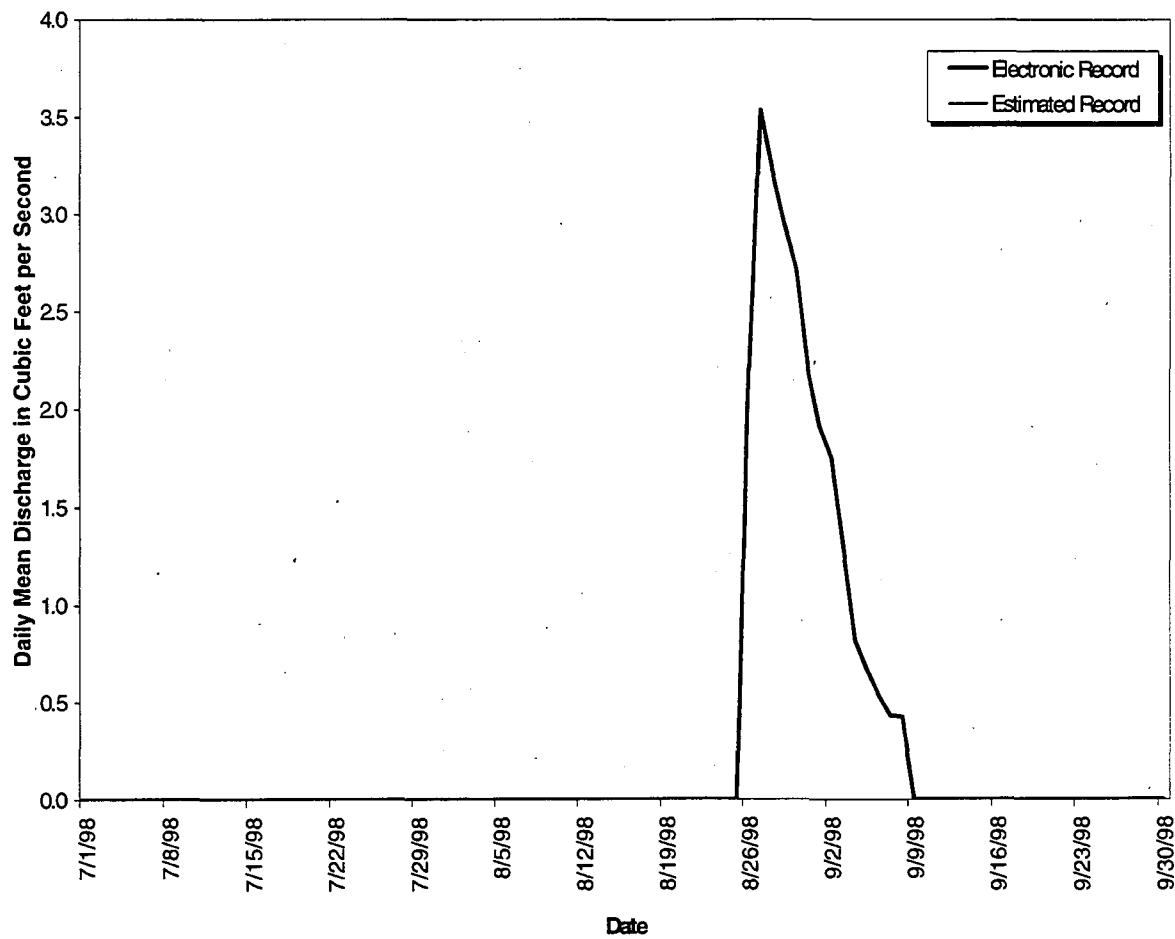


Figure 4-9. Mean Daily Discharge at Gaging Station GS11 Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-10. Gaging Station GS16: Mean Daily Discharge (cubic feet per second)

Day	July-97	August-97	September-97
1	0.054	0.070	0.070
2	0.053	0.057	0.058
3	0.054	0.072	0.050
4	0.058	0.191	0.048
5	0.054	0.094	0.048
6	0.061	0.063	0.045
7	0.056	0.053	0.049
8	0.064	0.049	0.051
9	0.103	0.054	0.049
10	0.068	0.067	0.046
11	0.056	0.060	0.046
12	0.047	0.052	0.071
13	0.044	0.047	0.065
14	0.044	0.048	0.062
15	0.045	0.050	0.058
16	0.045	0.053	0.056
17	0.042	0.049	0.053
18	0.034	0.046	0.051
19	0.029	0.048	0.049
20	0.037	0.048	0.056
21	0.042	0.050	0.086
22	0.060	0.049	0.081
23	0.069	0.043	0.076
24	0.074	0.046	0.073
25	0.092 ^a	0.055	0.060
26	0.065	0.053	0.055
27	0.056	0.048	0.057
28	0.055	0.047	0.059
29	0.053	0.047	0.059
30	0.151	0.045	0.063
31	0.079	0.066	NA
Monthly Average (cfs)	0.059	0.059	0.058

Monthly Discharge

Cubic Feet	159126	157049	151215
Gallons	1190342	1174807	1131166
Acre-Feet	3.65	3.60	3.47

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
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Gaging Station GS16 is located $39^{\circ} 53' 1''N$, $105^{\circ} 12' 8''W$ along Antelope Springs Gulch, south of Woman Creek (See Section 4 Map). This station is a Buffer Zone Monitoring Location and is a monitoring point for water entering Woman Creek from Antelope Springs. No samples are collected at this location.

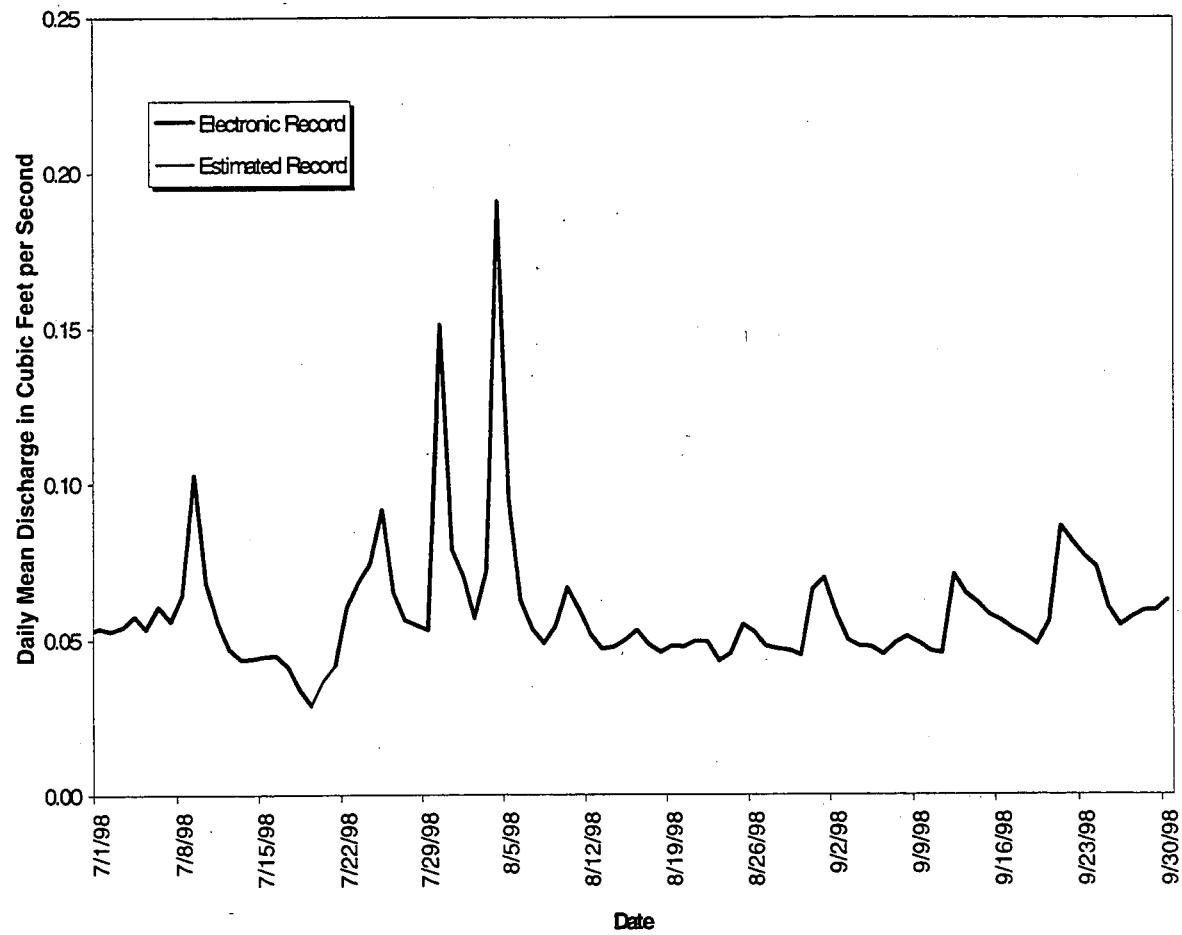


Figure 4-10. Mean Daily Discharge at Gaging Station GS16 Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Table 4-11. Gaging Station GS27: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0043	0.0000 ^a
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000 ^a
7	0.0000	0.0000	0.0000 ^a
8	0.0000	0.0000	^b
9	0.0000	0.0000	^b
10	0.0000	0.0000	0.0000 ^a
11	0.0000	0.0000	0.0000 ^a
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000
22	0.0003	0.0000	0.0000
23	0.0003	0.0000	^b
24	0.0000	0.0000	^b
25	0.0015	0.0000	0.0000 ^a
26	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000
30	0.0011	0.0000	0.0000
31	0.0000	0.0000	NA
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	284	376	7
Gallons	2125	2809	53
Acre-Feet	0.007	0.009	0.000

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

^b Bad data because of equipment failure.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Gaging Station GS27 is located at State Plane 2080529; 751216, at the small drainage ditch NW of Building 884 (See Section 4 May). This location is a performance and Best Management Practices Monitoring Location and monitors water draining from the Building 889 area. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

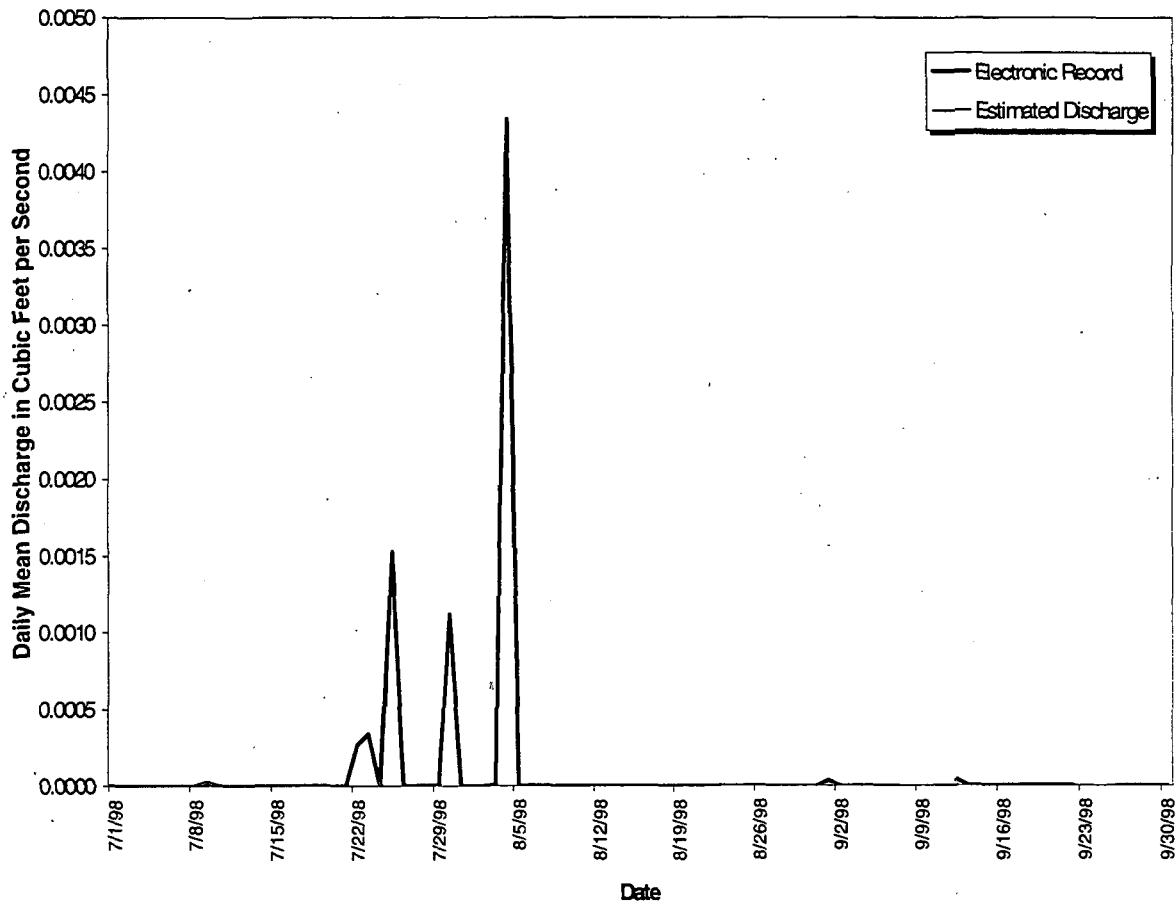


Figure 4-11. Mean Daily Discharge at Gaging Station GS27 Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-12. Gaging Station GS31: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31	0.000	0.000	NA
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Gaging Station GS31 is located at State Plane 2089268: 747506, at the Pond C-2 Outfall (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond C-2. This station collects samples for selected radionuclides using continuous flow-paced sampling.

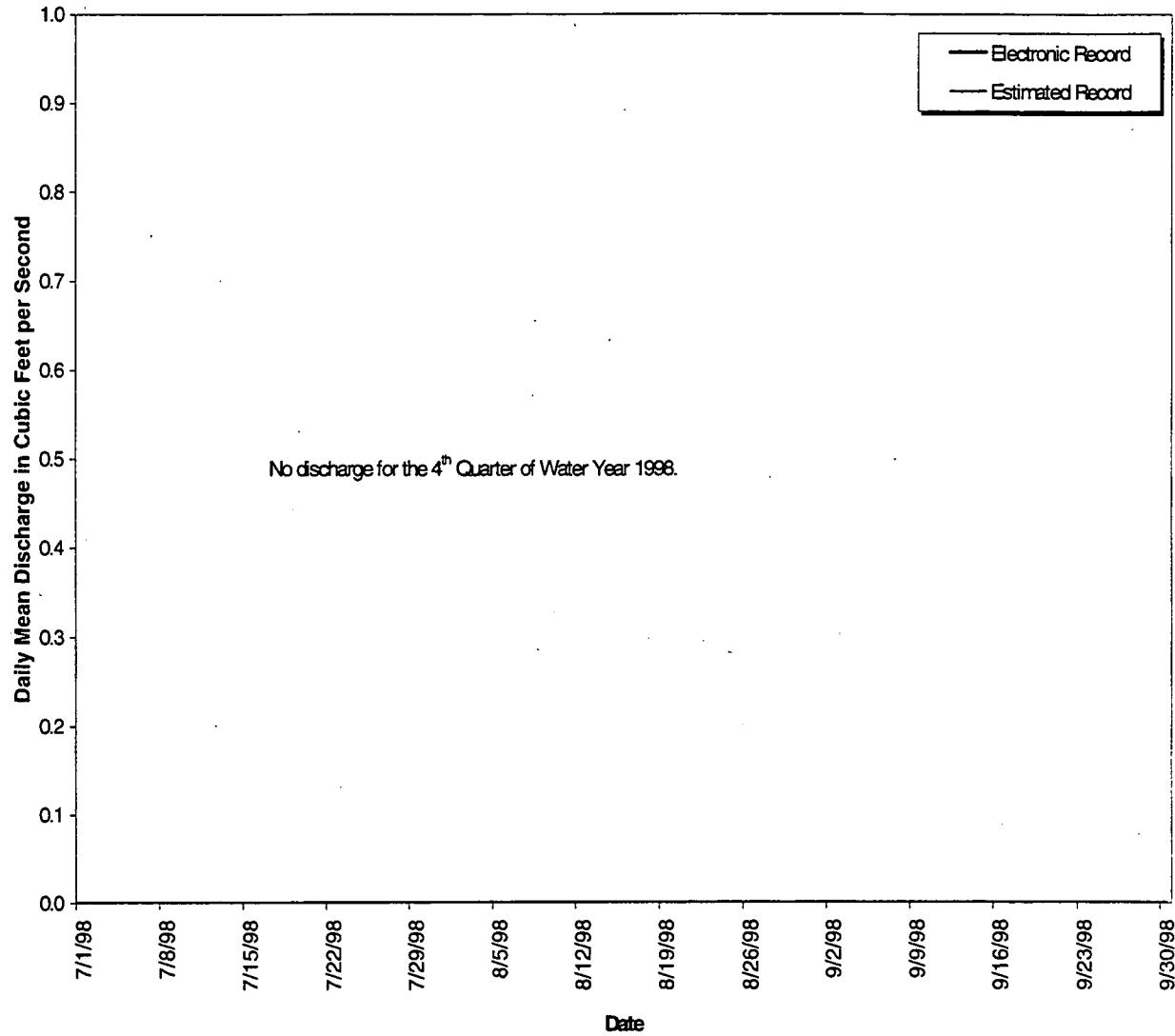


Figure 4-12. Mean Daily Discharge at Gaging Station GS31 Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-13. Gaging Station GS33: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.002	0.002
2	0.000	0.000	0.000
3	0.000	0.001	0.000
4	0.000	0.008	0.000
5	0.000	0.000	0.000
6	0.002	0.000	0.000
7	0.000	0.000	0.000
8	0.002	0.000	0.001
9	0.002	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.003
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.001	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.001
20	0.000	0.000	0.000
21	0.001	0.000	0.003
22	0.002	0.000	0.000
23	0.002	0.000	0.001
24	0.001	0.001	0.000
25	0.005	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.004	0.000	0.000
31	0.000	0.002	NA
Monthly Average (cfs)	0.001	0.000	0.000

Monthly Discharge

Cubic Feet	1785	1288	979
Gallons	13351	9636	7320
Acre-Feet	0.04	0.03	0.02

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
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Gaging Station GS33 is located on No Name Gulch at the confluence with Walnut Creek. This station is a RFCA Source Location station monitoring water discharge from the Landfill Pond as well as runoff from the No Name Gulch drainage basin reaching Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

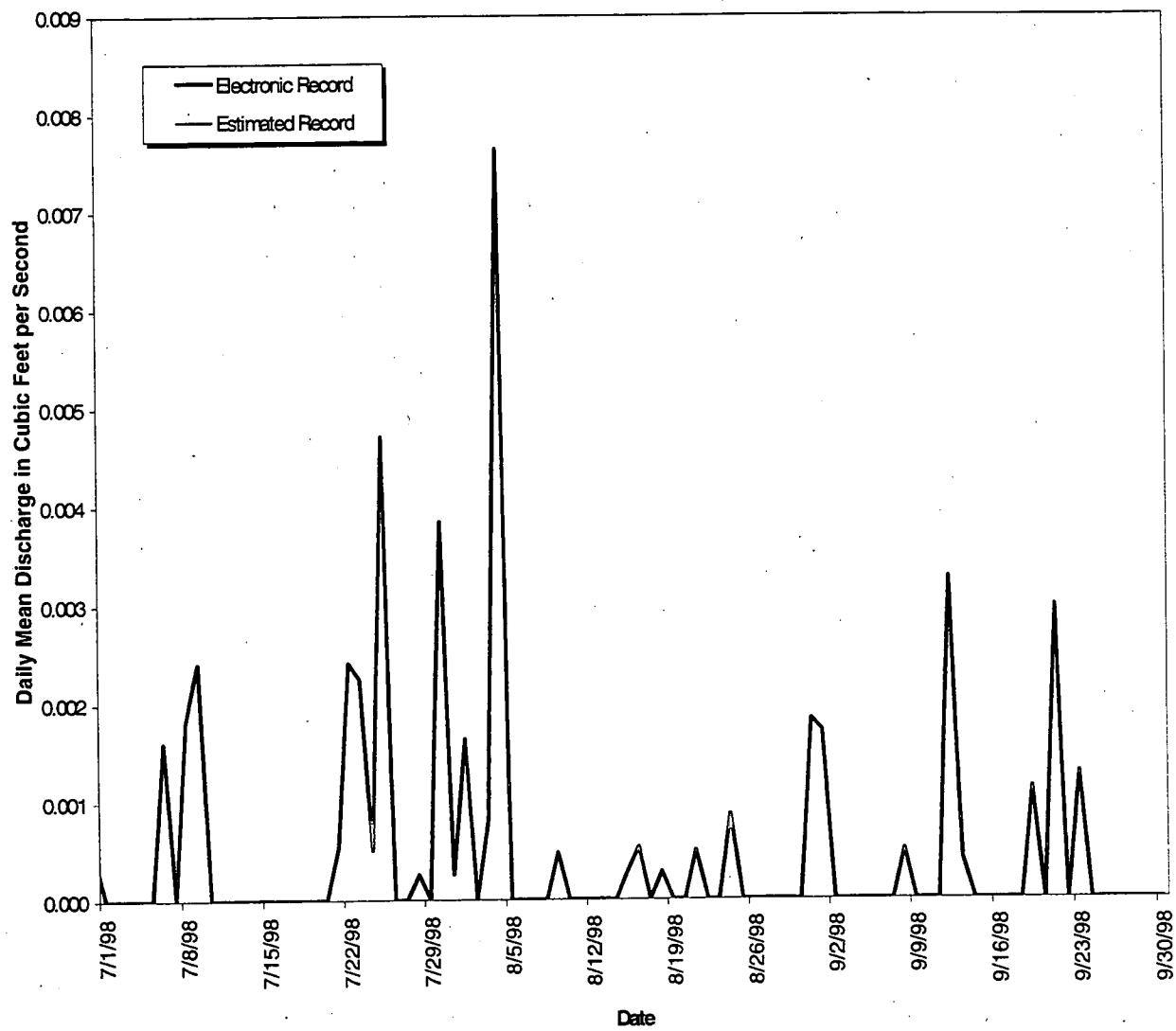


Figure 4-13. Mean Daily Discharge at Gaging Station GS33, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-14. Gaging Station GS34: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000 ^a	0.000	1.868
2	0.000 ^a	0.000	1.721
3	0.000	0.000	1.313
4	0.000	0.000	0.841
5	0.000	0.000	0.717
6	0.000	0.002	0.593
7	0.000	0.001	0.440
8	0.000	0.000	0.422
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.001
16	0.000	0.000	0.001
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.001
26	0.000	1.978	0.000
27	0.000	3.575	0.000
28	0.000	3.192	0.002
29	0.000	2.930	0.000
30	0.000	2.721	0.000
31	0.000	2.176	
Monthly Average (cfs)	0.000	0.535	0.264

Monthly Discharge

Cubic Feet	0	1432106	684243
Gallons	0	10712899	5118492
Acre-Feet	0.00	32.87	15.71

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
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Gaging Station GS34 is located on Walnut Creek upstream of the confluence with McKay Ditch. This station is a RFCA Source Location station monitoring water discharged from Ponds A-4, B-5, and the Landfill Pond as well as runoff from the No Name Gulch and upper Walnut Creek drainage basins. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

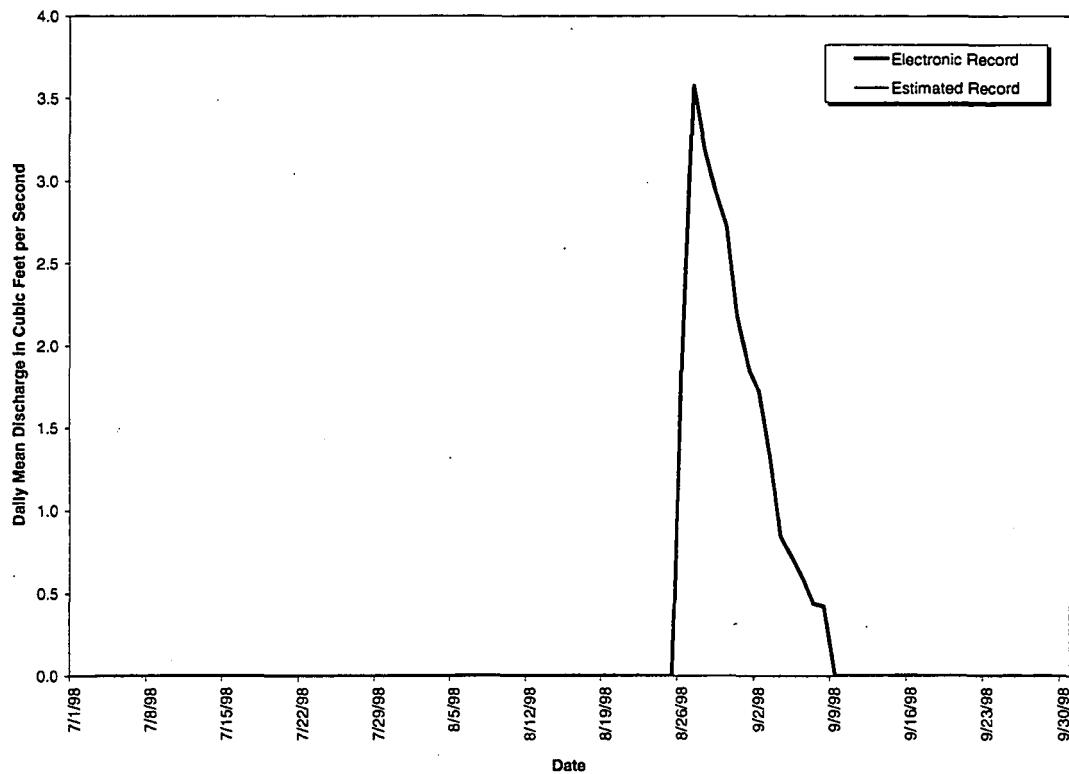


Figure 4-14. Mean Daily Discharge at Gaging Station GS34, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-15. Gaging Station GS35: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.027	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.035	0.000	0.000
26	0.001	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31	0.000	0.000	NA
Monthly Average (cfs)	0.001	0.001	0.000

Monthly Discharge

Cubic Feet	3094	2323	0
Gallons	23146	17377	0
Acre-Feet	0.07	0.05	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Gaging Station GS35 is located on McKay Ditch at the confluence with Walnut Creek. This station is a RFCA Source Location station monitoring runoff from the McKay Ditch drainage basin reaching Walnut Creek. This station collects samples for selected radionuclides using continuous flow-paced sampling.

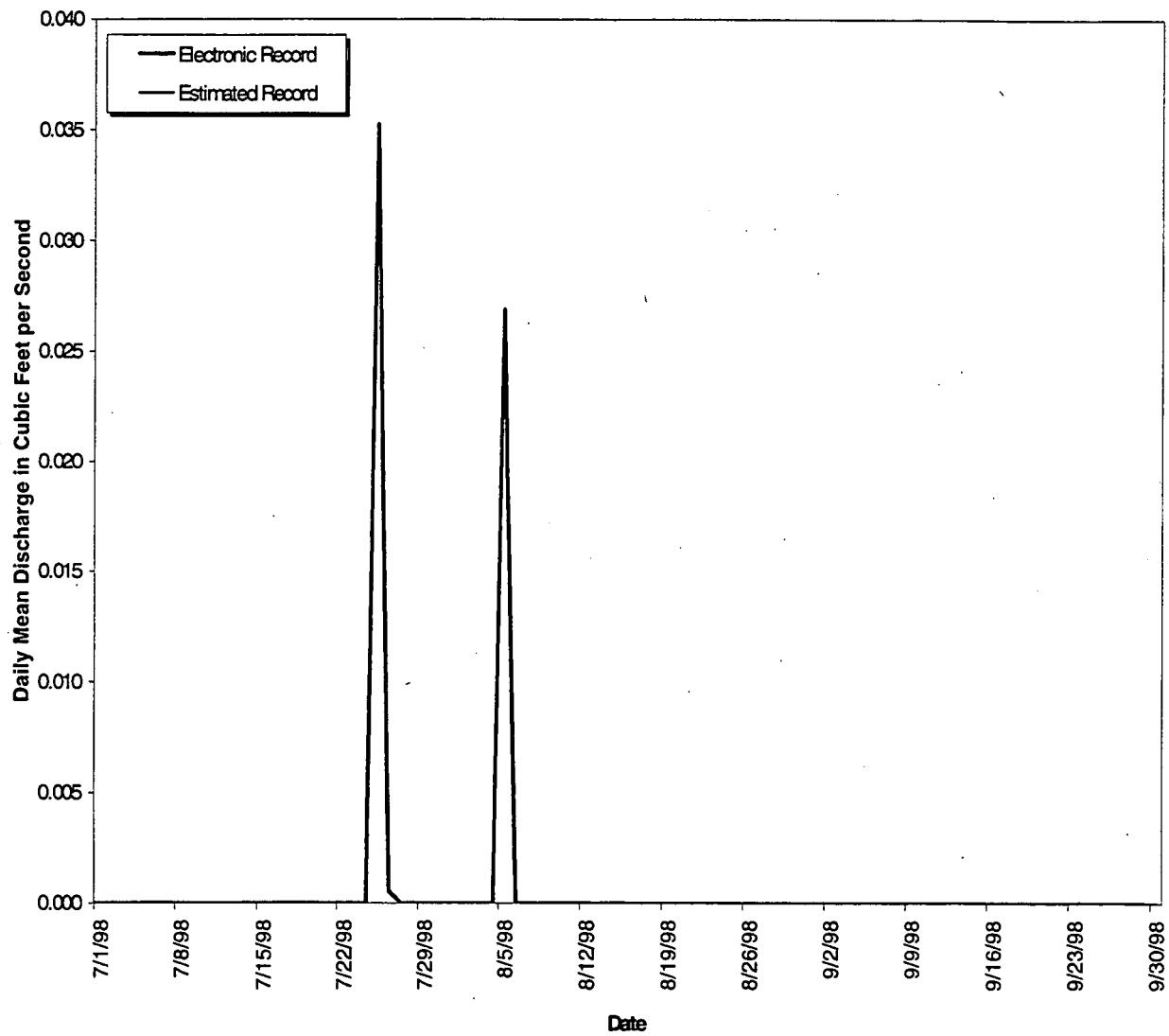


Figure 4-15. Mean Daily Discharge at Gaging Station GS35, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-16. Gaging Station GS37: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.001
2	0.000	0.000	0.000
3	0.000	0.002	0.000
4	0.000	0.013	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.004	0.000	0.000
10	0.000	0.003	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.001
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.003	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.004	0.000	0.000
23	0.004	0.000	0.004
24	0.002	0.000	0.000
25	0.009	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.014	0.000	0.000
31	0.000	0.004	NA
Monthly Average (cfs)	0.001	0.001	0.000

Monthly Discharge

Cubic Feet	3196	2228	503
Gallons	23907	16666	3760
Acre-Feet	0.07	0.05	0.01

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
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Gaging Station GS37 is located in the Central Avenue Ditch north of Building 443. This station is a RFCA Performance Monitoring station monitoring runoff from the Building 123 area. Storm event samples are collected for selected radionuclides and water quality parameters.

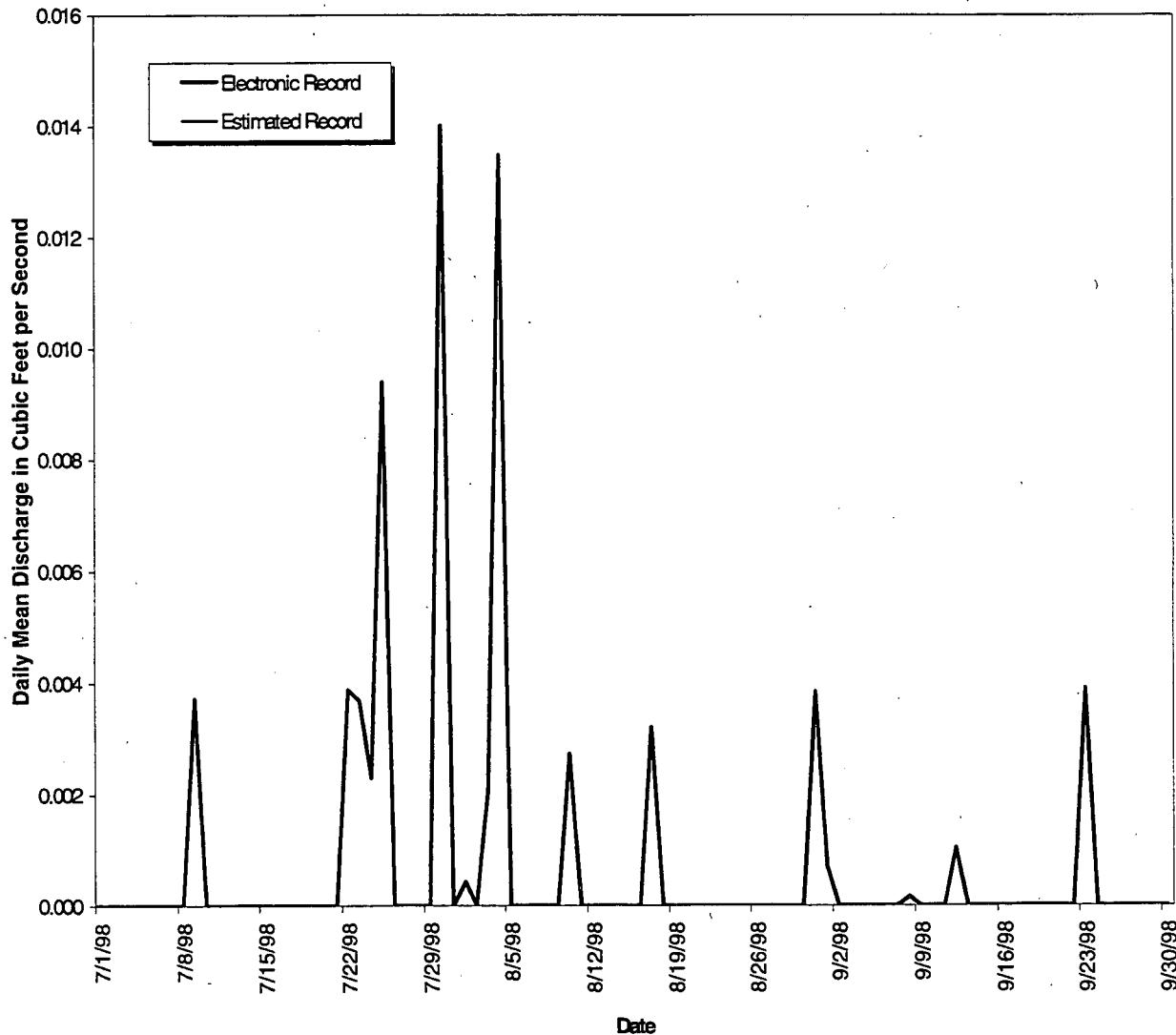


Figure 4-16. Mean Daily Discharge at Gaging Station GS37, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-17. Gaging Station GS38: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.008
2	0.000	0.000	0.000
3	0.000	0.008	0.000
4	0.000	0.270 ^a	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.002	0.000	0.000
9	0.022	0.000	0.000
10	0.000	0.003	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.012
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.017	0.000	0.000
23	0.036	0.000	0.000
24	0.014	0.000	0.000
25	0.147	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.146	0.000	0.000
31	0.000	0.017	NA
Monthly Average (cfs)	0.012	0.010	0.001

Monthly Discharge

Cubic Feet	33347	25719	1715
Gallons	249452	192388	12831
Acre-Feet	0.77	0.59	0.04

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Gaging Station GS38 is located in Central Avenue Ditch northwest of Building 889. This location is a RFCA Source Location station monitoring water flowing from a drainage basin in the southwest quadrant of the Industrial Area to South Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

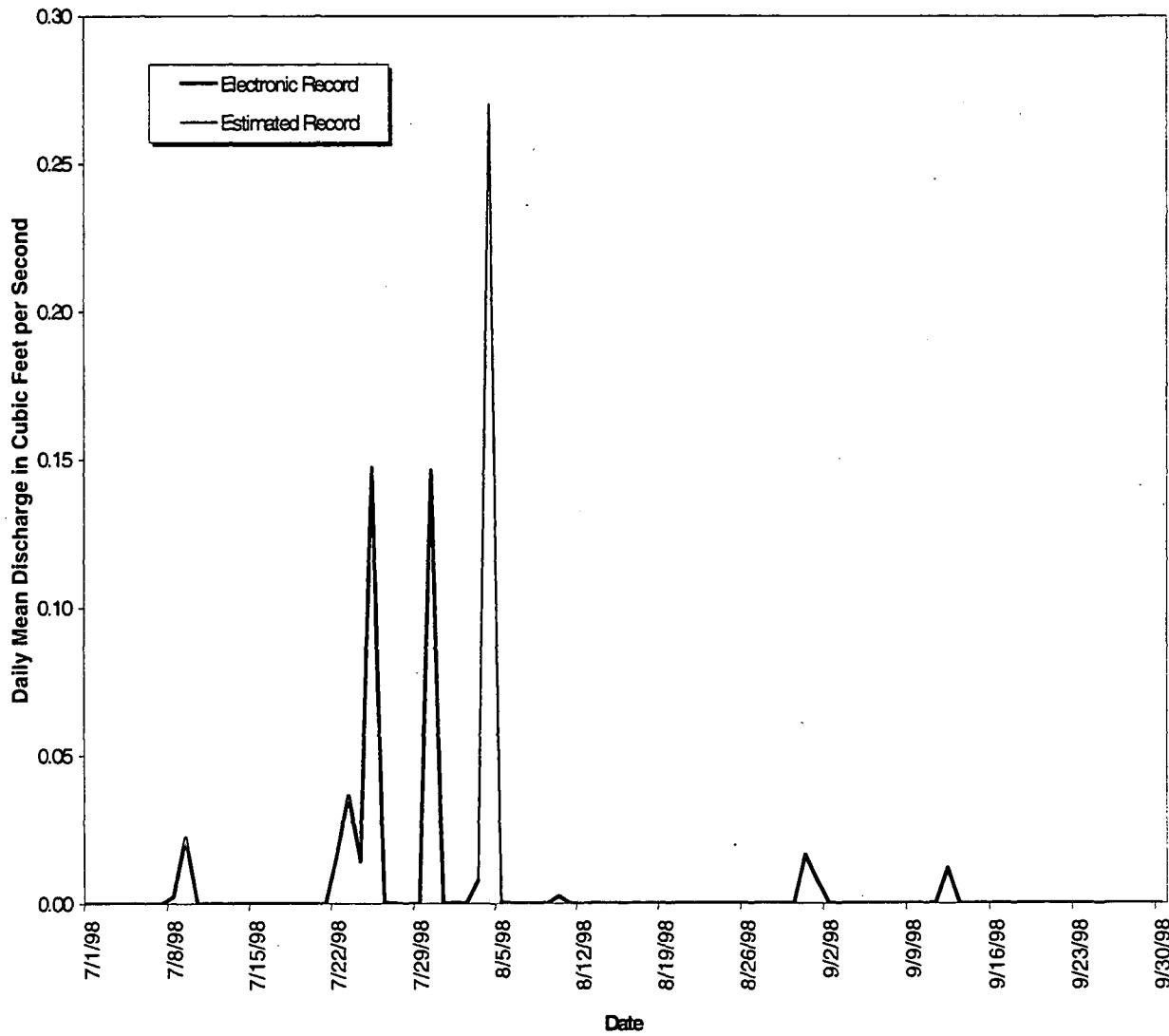


Figure 4-17. Mean Daily Discharge at Gaging Station GS38, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-18. Gaging Station GS39: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.002
2	0.000	0.000	0.000
3	0.000	0.002	0.000
4	0.000	0.061 ^a	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.002	0.000	0.000
9	0.001	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.004
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.006	0.000	0.000
23	0.003	0.000	0.000
24	0.006	0.000	0.000
25	0.042	0.000	0.000
26	0.001	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.028	0.000	0.000
31	0.000	0.001	NA
Monthly Average (cfs)	0.003	0.002	0.000

Monthly Discharge

Cubic Feet	7735	5595	522
Gallons	57864	41853	3905
Acre-Feet	0.18	0.13	0.01

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
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Gaging Station GS39 is located in the drainage ditch northwest of the 904 Pad. This location is a RFCA Source Location station monitoring water flowing from the area of the 903 Pad as well as part of the 904 Pad and contractor yard to South Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

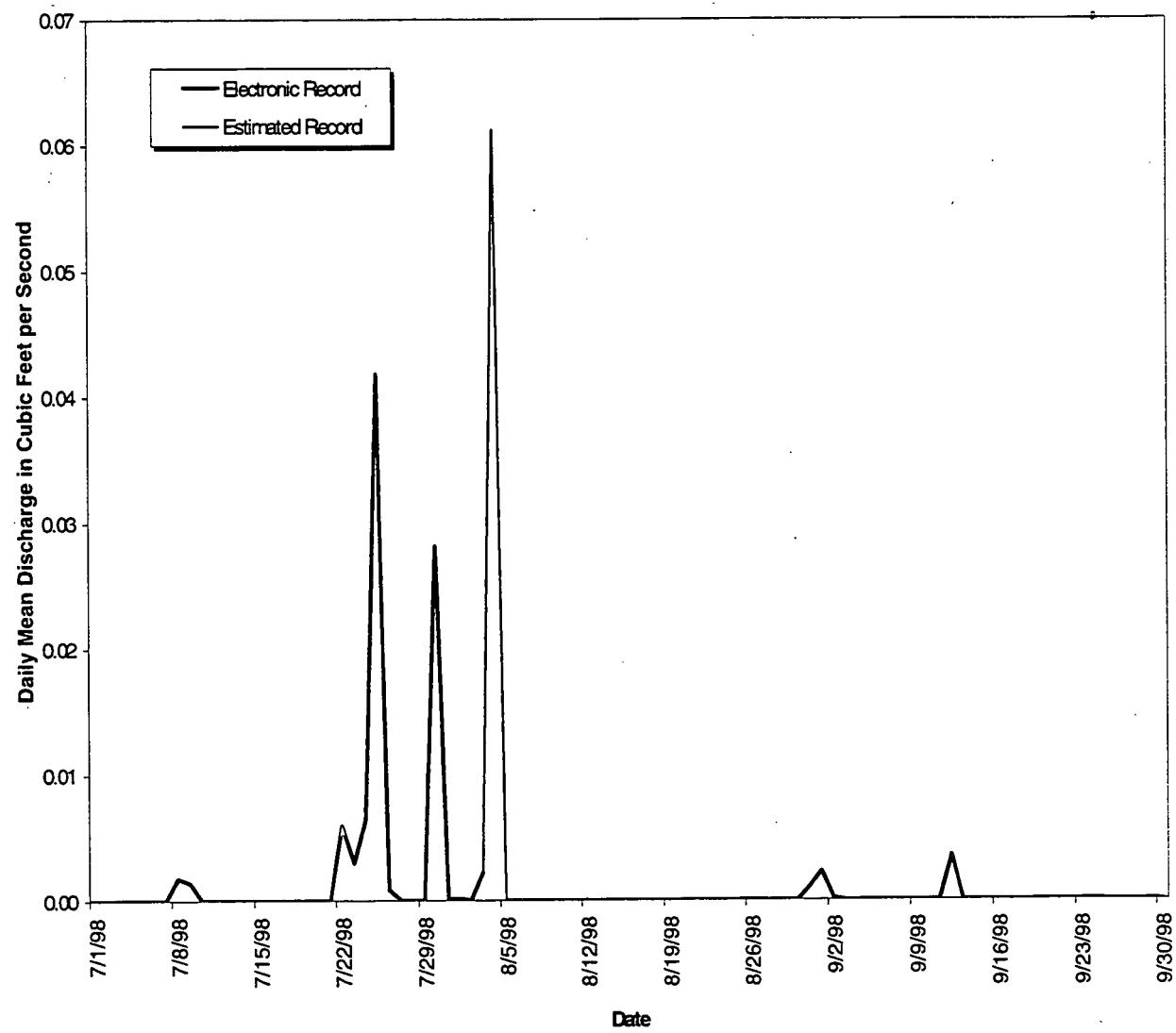


Figure 4-18. Mean Daily Discharge at Gaging Station GS39, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-19. Gaging Station GS40: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.013	0.058	0.072
2	0.012	0.038	0.030
3	0.015	0.068	0.028
4	0.016	0.358	0.028
5	0.012	0.056	0.027
6	0.023	0.035	0.026
7	0.017	0.035	0.027
8	0.054	0.036	0.028
9	0.085	0.043	0.016
10	0.033	0.062	0.017
11	0.028	0.050	0.017
12	0.029	0.036	0.059
13	0.029	0.036	0.024
14	0.032	0.039	0.029
15	0.033	0.040	0.013
16	0.036	0.040	0.016
17	0.033	0.034	0.016
18	0.031	0.037	0.016
19	0.031	0.039	0.022
20	0.027	0.040	0.021
21	0.037	0.037	0.067
22	0.231	0.033	0.029
23	0.130	0.031	0.034
24	0.065	0.035	0.024
25	0.249	0.030	0.023
26	0.045	0.026	0.026
27	0.042	0.027	0.026
28	0.044	0.027	0.027
29	0.044	0.025	0.028
30	0.225	0.023	0.032
31	0.047	0.105	NA
Monthly Average (cfs)	0.056	0.051	0.028

Monthly Discharge

Cubic Feet	151034	136611	73135
Gallons	1129814	1021920	547088
Acre-Feet	3.47	3.14	1.68

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Gaging Station GS40 is located on the concrete spillway east of Tenth Street, south of Building 997. This location is a RFCA Source Location station monitoring water flowing from the 700 area to South Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

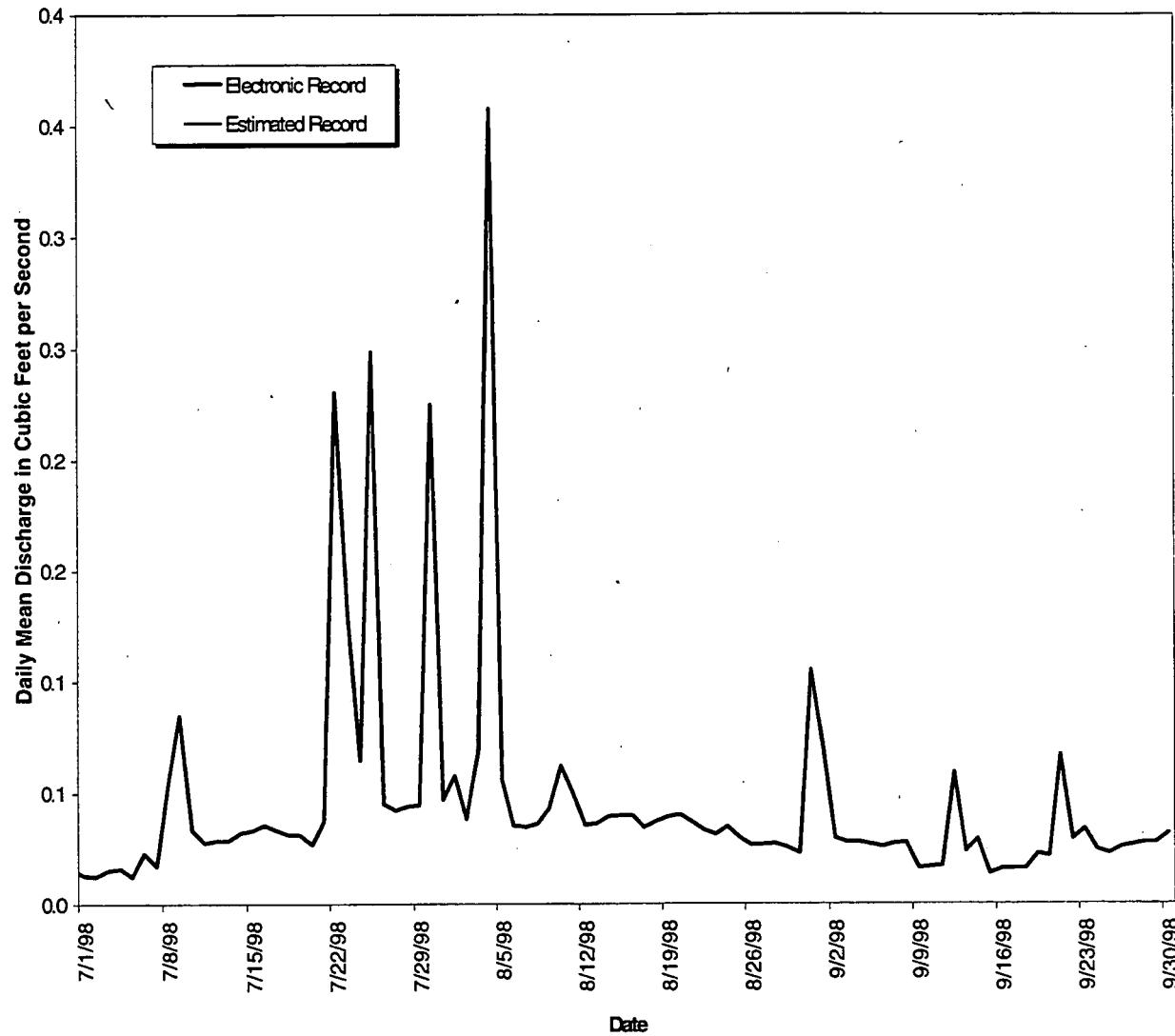


Figure 4-19. Mean Daily Discharge at Gaging Station GS40, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-20. Gaging Station SW022: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.005	0.000
4	0.000	0.520	0.000
5	0.000	0.007	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.002	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000 ^a	0.000	0.000
21	0.000 ^a	0.000	0.000
22	0.003 ^a	0.000	0.000
23	0.043 ^a	0.000	0.000
24	0.017 ^a	0.000	0.000
25	0.267 ^a	0.000	0.000
26	0.008	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.210	0.000	0.000
31	0.002	0.000	NA
Monthly Average (cfs)	0.018	0.017	0.000

Monthly Discharge

Cubic Feet	47678	45984	0
Gallons	356653	343983	0
Acre-Feet	1.09	1.06	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Gaging Station SW022 is located $39^{\circ} 53' 30''\text{N}$, $105^{\circ} 11' 30''\text{W}$, at the Central Avenue Ditch at the Inner East Gate (See Section 4 Map). This location is a RFCA New Source Detection Location and monitors water in the Central Avenue Ditch entering the B-Series Ponds and South Walnut Creek. Storm event samples are collected for selected radionuclides.

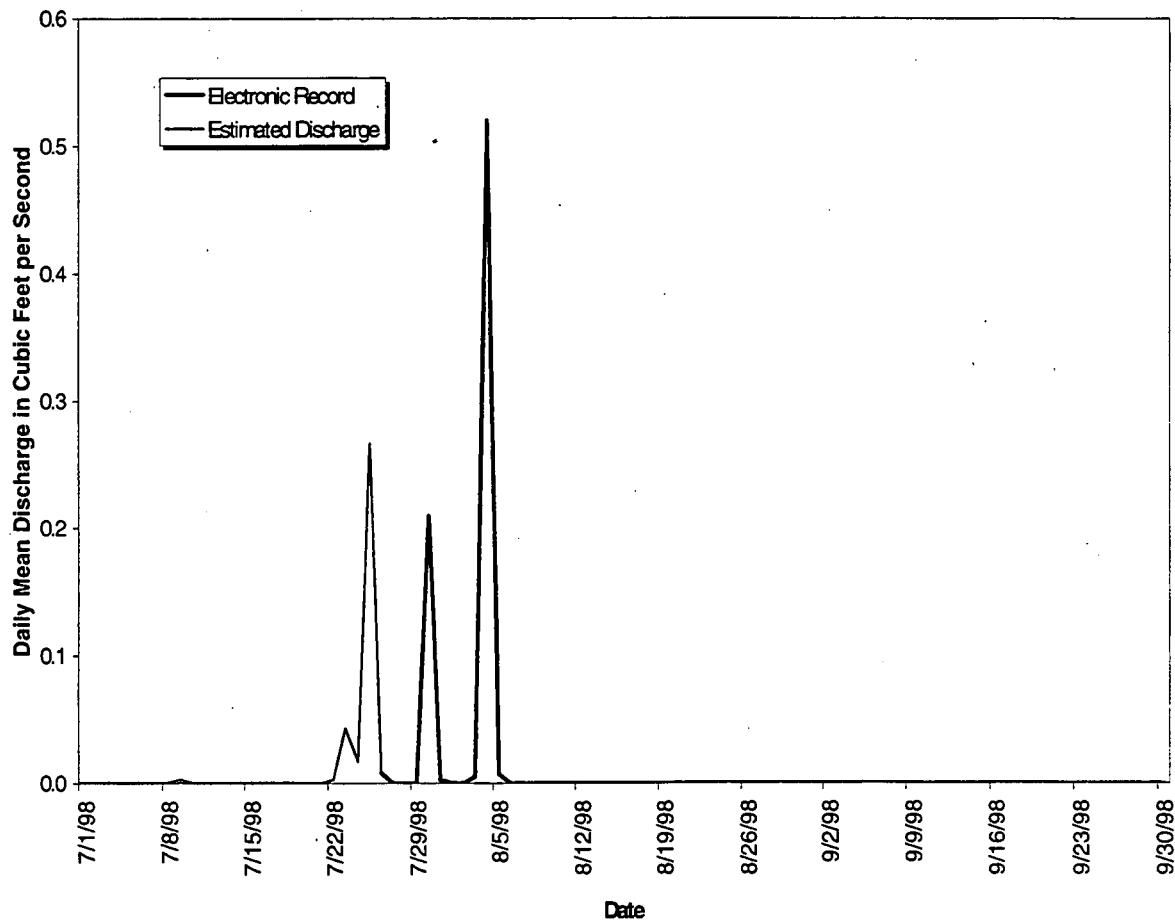


Figure 4-20. Mean Daily Discharge at Gaging Station SW022, Water Year 1998(July, August, and September)

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Table 4-21. Gaging Station SW027: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.000	0.002	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.129	0.000
5	0.000	0.129	0.000
6	0.000	0.003	0.000
7	0.000	0.001	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000	0.000	0.000
30	0.021	0.000	0.000
31	0.059	0.000	NA
Monthly Average (cfs)	0.003	0.009	0.000

Monthly Discharge

Cubic Feet	6954	22896	0
Gallons	52021	171274	0
Acre-Feet	0.16	0.53	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Gaging Station SW027 is located 39° 53' 12" N, 105° 11' 4"W, at the South Interceptor Ditch above Pond C-2 (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water in the South Interceptor Ditch entering Pond C-2. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

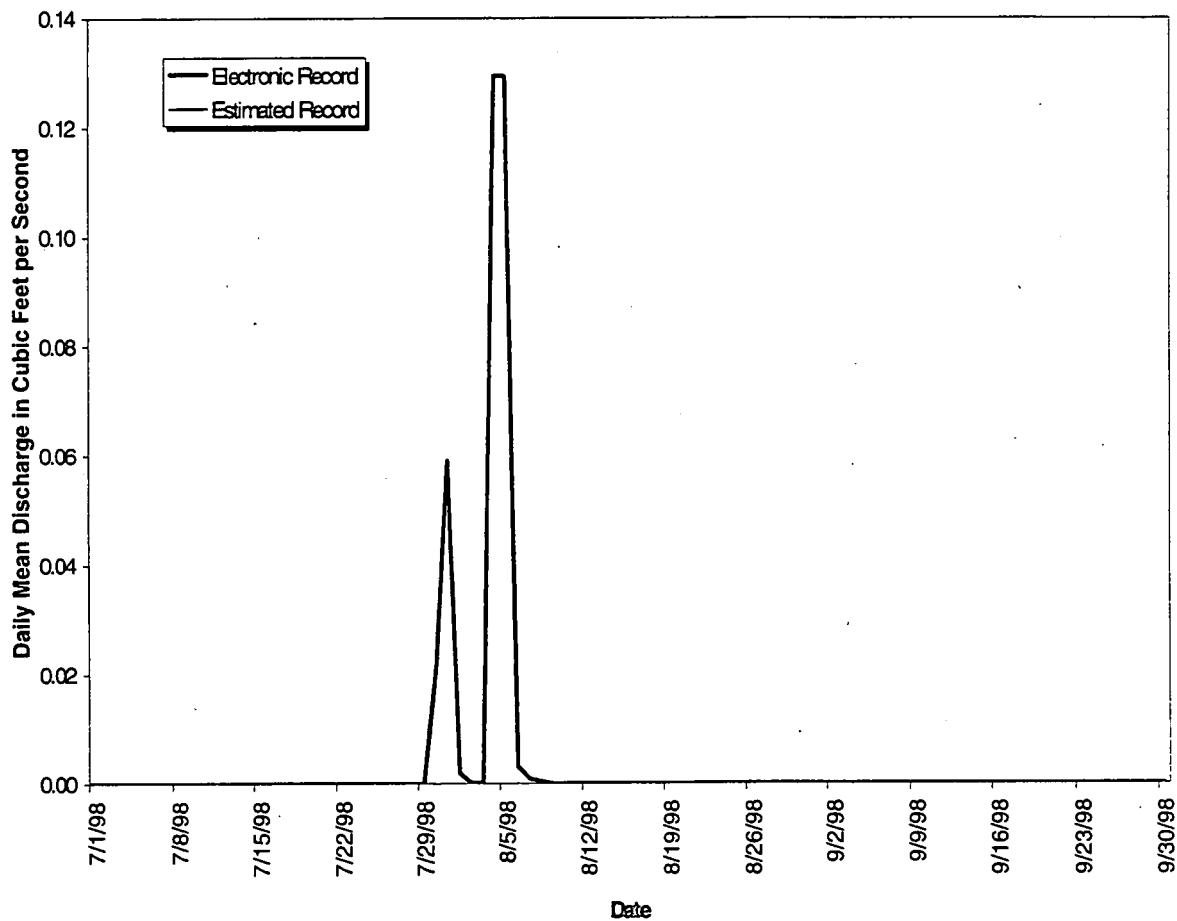


Figure 4-21. Mean Daily Discharge at Gaging Station SW027, Water Year 1998
(July, August, and September)

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998*

Table 4-22. Gaging Station SW091: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000
31	0.0000	0.0000	NA
Monthly Average (cfs)	0.0000	0.0000	0.0000

Monthly Discharge

Cubic Feet	6	5	1
Gallons	47	40	5
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Gaging Station SW091 is located at State Plane 2086064; 751322, along the drainage NE of the Solar Ponds draining to the A-Series Ponds (See Section 4 Map). This location is a RFCA New Source Detection Location and monitors water draining from the area NE of the Solar Ponds. Storm event samples are collected for selected radionuclides.

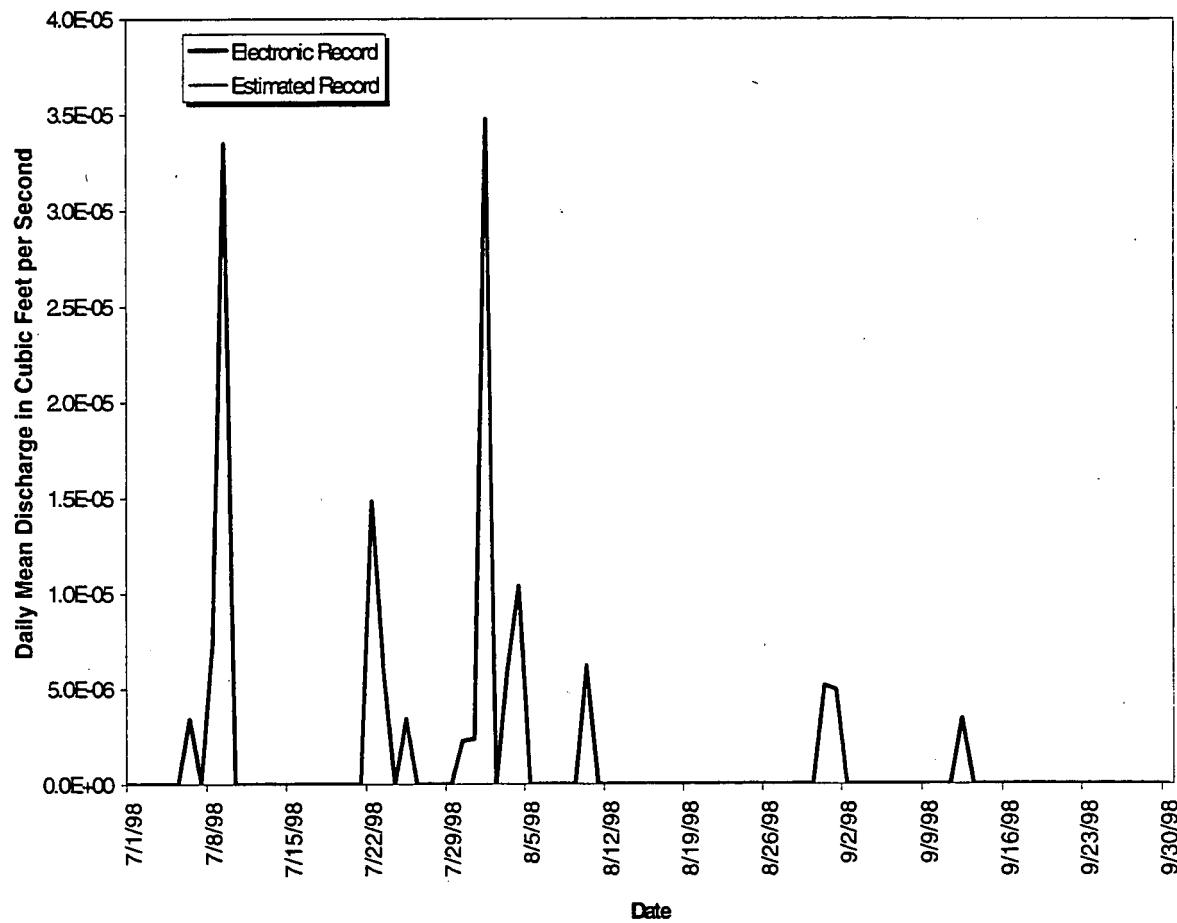


Figure 4-22. Mean Daily Discharge at Gaging Station SW091, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Table 4-23. Gaging Station SW093: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.073	0.125	0.130
2	0.068	0.067	0.070
3	0.069	0.112	0.065
4	0.068	0.943	0.060
5	0.060	0.173	0.058
6	0.067	0.081	0.057
7	0.069	0.066	0.057
8	0.072	0.053	0.060
9	0.209	0.057	0.055
10	0.074	0.117	0.053
11	0.057	0.072	0.051
12	0.050	0.057	0.091
13	0.059	0.047 ^a	0.070
14	0.068	0.051 ^a	0.057
15	0.062	0.058	0.055
16	0.051	0.057	0.055
17	0.047	0.049	0.056
18	0.043	0.044	0.057
19	0.040	0.043	0.057
20	0.039	0.045	0.057
21	0.041	0.048	0.073
22	0.372	0.047	0.069
23	0.234	0.045	0.066
24	0.201	0.052	0.063
25	0.792	0.052	0.056
26	0.188	0.050	0.053
27	0.062	0.048	0.053
28	0.055	0.047	0.050
29	0.056	0.046	0.051
30	0.696	0.046	0.050
31	0.145	0.127	NA
Monthly Average (cfs)	0.135	0.094	0.062

Monthly Discharge

Cubic Feet	361571	252494	160331
Gallons	2704738	1888786	1199360
Acre-Feet	8.30	5.80	3.68

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

^a Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998

Gaging Station SW093 is located $39^{\circ} 53' 51''N$, $105^{\circ} 11' 48''W$, along North Walnut Creek at the 72" culvert 1000 feet above the Pond A-1 Bypass (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water leaving the Site Industrial Area and entering the A-Series Ponds and North Walnut Creek. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

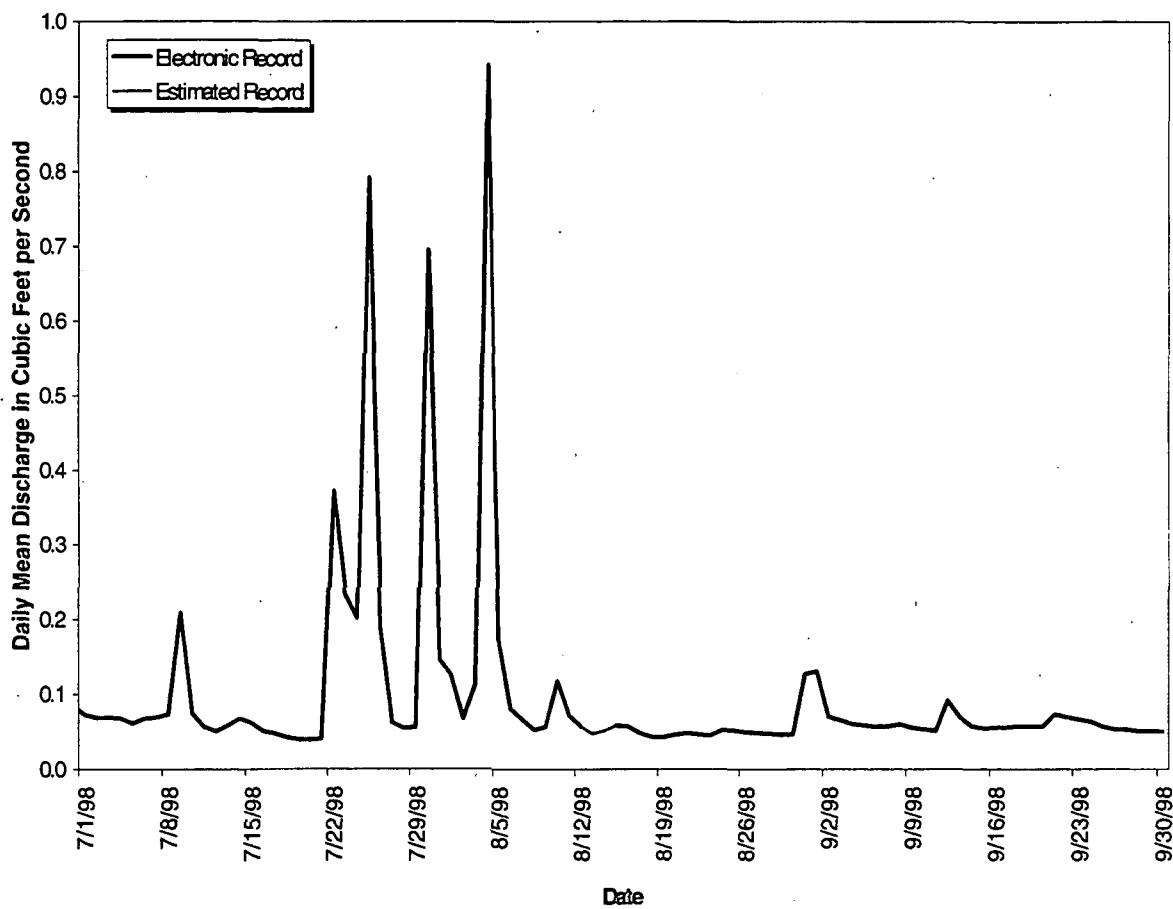


Figure 4-23. Mean Daily Discharge at Gaging Station SW093, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

Table 4-24. Gaging Station SW118: Mean Daily Discharge (cubic feet per second)

Day	July-98	August-98	September-98
1	0.003	0.023	0.000
2	0.002	0.014	0.000
3	0.001	0.015	0.000
4	0.003	0.114	0.000
5	0.003	0.093	0.000
6	0.001	0.049	0.000
7	0.003	0.025	0.000
8	0.002	0.018	0.000
9	0.006	0.022	0.000
10	0.004	0.033	0.000
11	0.004	0.043	0.000
12	0.000	0.025	0.000
13	0.000	0.013	0.000
14	0.000	0.000	0.000
15	0.000	0.006	0.000
16	0.000	0.009	0.000
17	0.000	0.016	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.016	0.000	0.000
23	0.012	0.000	0.000
24	0.011	0.000	0.000
25	0.053	0.000	0.000
26	0.014	0.000	0.000
27	0.004	0.000	0.000
28	0.003	0.000	0.000
29	0.006	0.000	0.000
30	0.065	0.000	0.000
31	0.033	0.000	NA
Monthly Average (cfs)	0.008	0.017	0.000

Partial Data Partial Data

Monthly Discharge

Cubic Feet	21501	44783	0
Gallons	160840	335001	0
Acre-Feet	0.49	1.03	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Gaging Station SW118 is located $39^{\circ} 53' 47''N$, $105^{\circ} 12' 16''W$, along North Walnut Creek above Portal 3 (See Section 4 Map). This station is a Buffer Zone Monitoring Location and monitors water leaving the NW portion of the Site Industrial Area and entering North Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

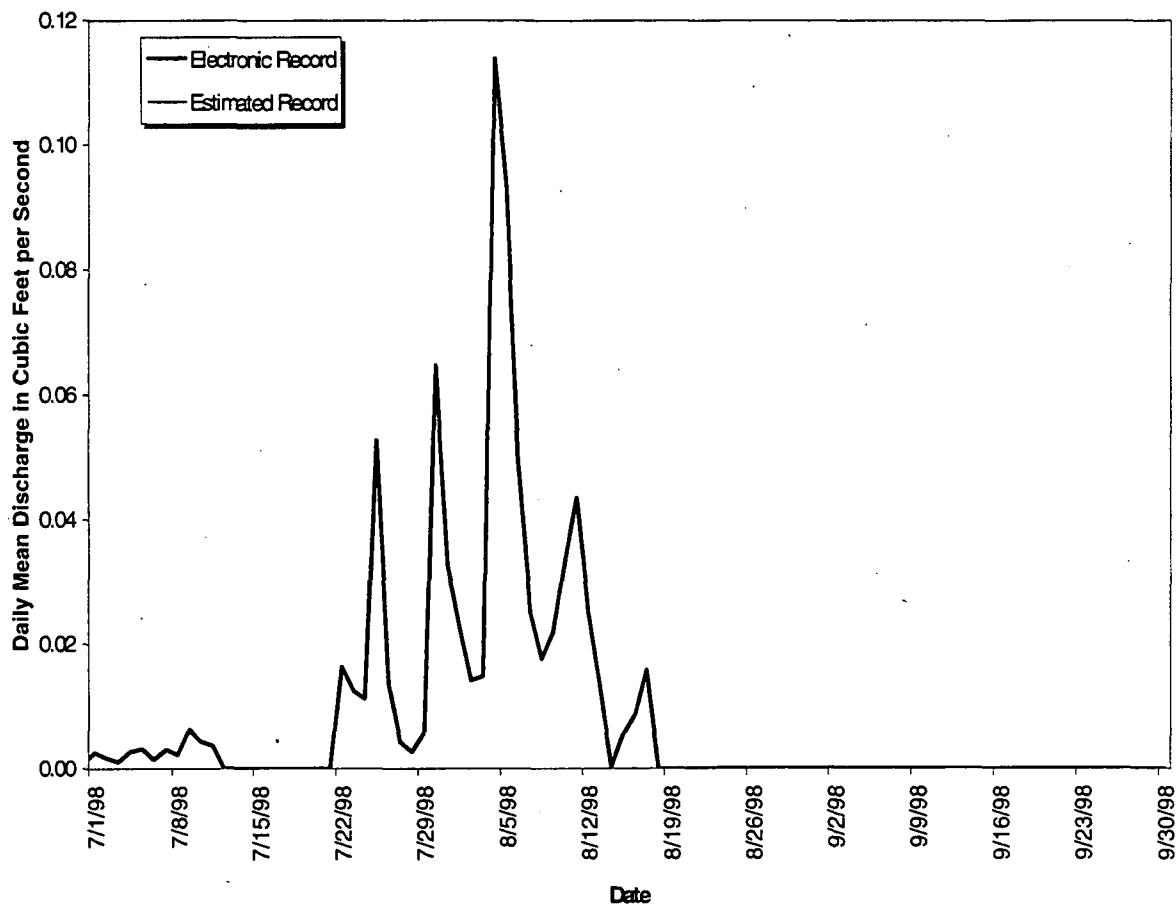


Figure 4-24. Mean Daily Discharge at Gaging Station SW118, Water Year 1998
(July, August, and September)

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July – September 1998*

Table 4-25. Gaging Station SW134: Mean Daily Discharge (cubic feet per second)

Day:	July-98	August-98	September-98
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.086	0.039
4	0.000	0.007	0.000
5	0.000	0.002	0.000
6	0.054	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.088	0.000
9	0.000	0.000	0.073
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.107	0.000	0.000
15	0.000	0.000	0.075
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.053	0.000
19	0.000	0.090	0.000
20	0.017	0.000	0.000
21	0.000	0.000	0.008
22	0.000	0.000	0.032
23	0.000	0.000	0.006
24	0.000	0.000	0.107
25	0.000	0.000	0.000
26	0.000	0.089	0.000
27	0.000	0.000	0.000
28	0.163	0.000	0.000
29	0.000	0.000	0.000
30	0.000	0.000	0.000
31	0.000	0.062	NA
Monthly Average (cfs)	0.011	0.015	0.011

Partial Data Partial Data

Monthly Discharge

Cubic Feet	29356	41127	29350
Gallons	219597	307648	219550
Acre-Feet	0.67	0.94	0.67

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

*Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998*

Gaging Station SW134 is located $39^{\circ} 53' 31''N$, $105^{\circ} 13' 44''W$, at Rock Creek below Jefferson County Gravel Pit (See Section 4 Map). This station is a Buffer Zone Monitoring Location and monitors water pump discharged from gravel pits and entering Rock Creek. Storm event samples are collected for selected water quality parameters, metals, and major ions.

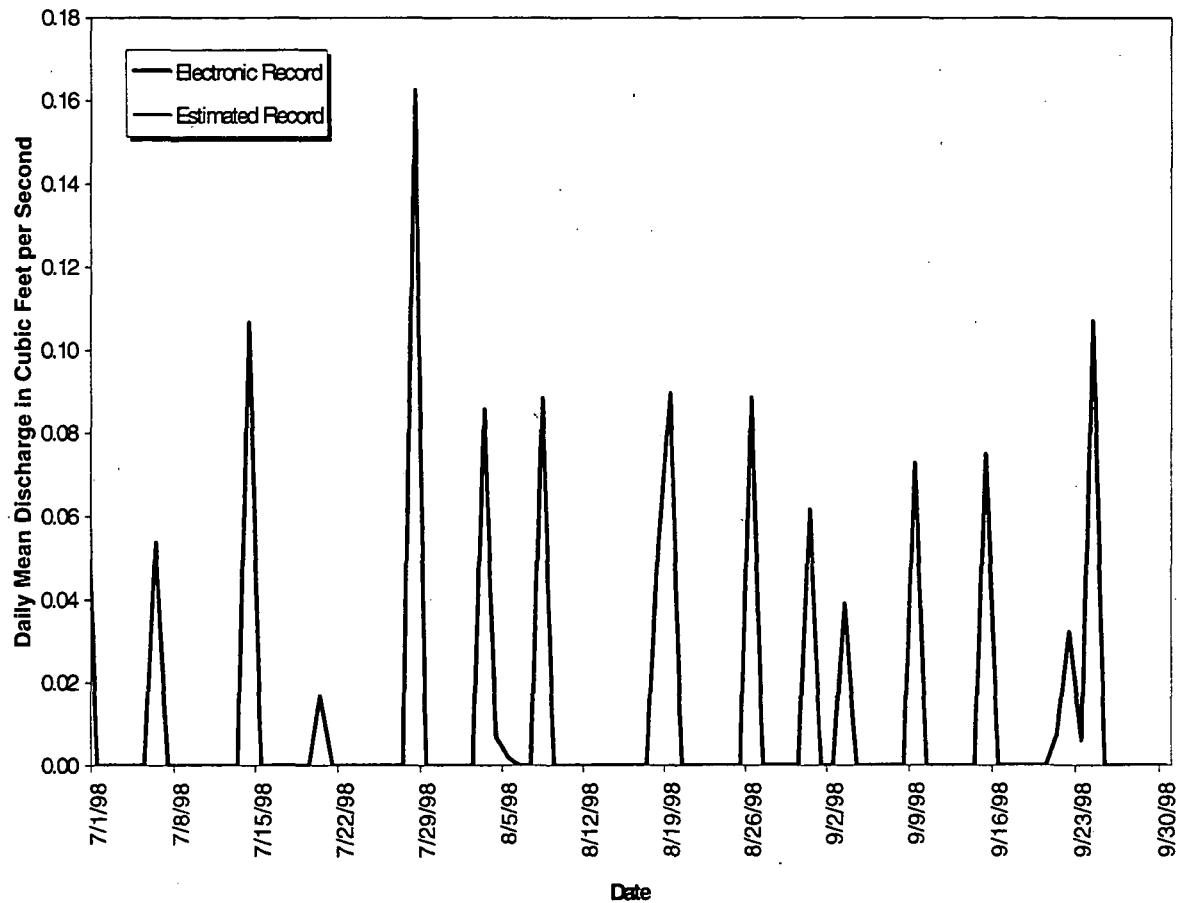


Figure 4-25. Mean Daily Discharge at Gaging Station SW134, Water Year 1998
(July, August, and September)

Rocky Flats Environmental Technology Site
Quarterly Environmental Monitoring Report: July - September 1998

4.2 WATER QUALITY DATA

Table 4-26. Radionuclides, Water Year 1998 (July, August, and September)

Location	Sample Dates	Analyte Pu-239, -240 [pCi/L]	Analyte Am-241 [pCi/L]	Analyte Total Uranium [pCi/L]	Analyte Tritium [pCi/L]
GS01	5/30/98 - 8/10/98	-0.011	0.002	a	120
GS01	8/11/98 -	e	e	a	e
GS03	3/23/98-4/1/98	0.004	-0.006	a	103
GS03	6/10/98 - 8/25/98	0.014	0.012	a	0
GS03	8/26/98 - 8/27/98	0.007	0.012	a	150
GS03	8/28/98 - 8/31/98	0.000	-0.007	a	160
GS03	9/1/98 - 9/7/98	0.006	-0.006	a	-242
GS03	9/8/98 -	e	e	a	e
GS10	6/23/98 - 7/7/98	0.019	0.030	4.466	a
GS10	7/8/98 - 7/22/98	0.169	0.164	2.593	a
GS10	7/23/98 - 7/25/98	0.167	0.728	1.278	a
GS10	7/26/98 - 7/30/98	0.092	0.050	1.617	a
GS10	7/31/98 - 8/14/98	0.144	0.114	1.881	a
GS10	8/15/98 - 9/7/98	0.009	0.033	2.710	a
GS10	9/8/98 - 9/23/98	0.029	0.023	2.595	a
GS10	9/24/98 - 10/7/98	0.027	0.039	2.395	a
GS11	8/26/98 - 8/27/98	-0.004	-0.011	1.495	a
GS11	8/28/98 - 8/30/98	0.010	-0.024	1.483	a
GS11	8/31/98 - 9/8/98	0.001	0.008	1.524	a
GS27	7/23/98	2.030	0.474	0.135	a
GS27	7/30/98	5.760	1.550	0.269	a
GS32	7/22/98	2.900	1.640	1.488	a
GS32	7/25/98	2.590	0.946	0.769	a
GS33	5/7/98 - 7/14/98	0.018	0.012	a	a
GS33	7/14/98 -	e	e	a	a
GS34	6/11/98 - 8/25/98	d	d	a	a
GS34	8/26/98 - 9/7/98	-0.007	0.025	a	a
GS34	9/8/98 -	e	e	a	a
GS35	6/3/98-	e	e	a	a
GS37	6/22/98	0.022	0.029	0.736	-10
GS37	7/9/98	0.030	-0.015	0.750	43
GS37	7/22/98	-0.009	0.003	0.192	200
GS37	7/23/98	0.007	0.013	0.243	210
GS38	6/5/98 - 8/17/98	0.046	0.039	a	a
GS38	8/18/98 -	e	e	a	a
GS39	6/6/98 - 7/29/98	0.114	0.029	a	a
GS39	7/30/98 - 8/18/98	0.096	0.049	a	a
GS39	8/19/98 -	e	e	a	a

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Table 4-26 (continued). Radionuclides, Water Year 1998 (July, August, and September)

Location	Sample Dates	Analyte Pu-239, -240 [pCi/L]	Analyte Am-241 [pCi/L]	Analyte Total Uranium [pCi/L]	Analyte Tritium [pCi/L]
GS40	6/5/98 - 7/26/98	0.007	0.008	a	a
GS40	7/27/98 - 8/26/98	0.012	0.034	a	a
GS40	8/27/98 - 10/21/98	c	c	a	a
SW022	7/23/98	0.036	0.011	0.725	a
SW022	7/30/98	0.650	0.106	0.658	a
SW027	5/26/98 - 9/9/98	0.052	-0.003	2.115	a
SW027	9/10/98 -	e	e	e	a
SW093	6/30/98 - 7/8/98	0.000	-0.008	5.851	a
SW093	7/9/98 - 7/16/98	0.000	0.008	4.821	a
SW093	7/17/98 - 7/25/98	0.079	0.037	2.570	a
SW093	7/26/98 - 7/30/98	0.061	0.033	2.237	a
SW093	7/31/98 - 8/13/98	0.062	0.033	2.567	a
SW093	8/14/98 - 9/2/98	0.002	-0.018	4.431	a
SW093	9/3/98 - 9/15/98	0.013	0.071	4.200	a
SW093	9/16/98 - 9/30/98	-0.005	0.011	5.422	a
SW118	6/30/98 - 7/27/98	0.018	0.014	a	a
SW118	7/28/98 - 8/5/98	-0.002	0.011	a	a
SW118	8/6/98 -	e	e	a	a

a Not applicable

b Not collected

c Incomplete laboratory analysis

d Non-sufficient quantity

e Composite sample in progress

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Table 4-27. Metals, Water Year 1998 (July, August, and September)

Location	Sample Dates	Analyte Be ug/L	Analyte Dissolved Cd ug/L	Analyte Cr ug/L	Analyte Dissolved Ag ug/L
GS10	6/11/98 - 6/22/98	undetect	undetect	0.1	0.1
GS10	7/8/98 - 7/22/98	1	0.05	20.5	undetect
GS10	7/23/98 - 7/25/98	0.36	0.07	6	undetect
GS10	7/26/98 - 7/30/98	0.17	0.09	2.6	undetect
GS10	7/31/98 - 8/14/98	undetect	undetect	2.5	undetect
GS10	8/15/98 - 9/7/98	0.06	undetect	1.8	undetect
GS10	9/8/98 - 9/23/98	a	a	a	a
GS10	9/24/98 - 10/7/98	a	a	a	a
SW027	5/26/98 - 9/9/98	b	b	b	b
SW027	9/10/98 -	c	c	c	c
SW093	6/15/98 - 6/29/98	undetect	0.11	0.28	0.15
SW093	6/30/98 - 7/8/98	undetect	undetect	0.31	undetect
SW093	7/9/98 - 7/16/98	0.06	0.09	0.99	undetect
SW093	7/17/98 - 7/25/98	0.16	undetect	4	undetect
SW093	7/26/98 - 7/30/98	0.18	0.23	2.4	undetect
SW093	7/31/98 - 8/13/98	undetect	0.64	3	undetect
SW093	8/14/98 - 9/2/98	undetect	undetect	0.97	0.05
SW093	9/3/98 - 9/15/98	a	a	a	a
SW093	9/16/98 - 9/30/98	a	a	a	a

a Incomplete laboratory analysis

b Non-sufficient quantity

c Composite sample in progress

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Table 4-28. Water Quality Parameters, Water Year 1998 (July, August, and September)

Location	Sample Dates	Analyte Hardness mg/L
GS10	6/11/98 - 6/22/98	240
GS10	7/8/98 - 7/22/98	180
GS10	7/23/98 - 7/25/98	95
GS10	7/26/98 - 7/30/98	120
GS10	7/31/98 - 8/14/98	130
GS10	8/15/98 - 9/7/98	200
GS10	9/8/98 - 9/23/98	190
GS10	9/24/98 - 10/7/98	190
SW027	5/26/98 - 9/9/98	a
SW027	9/10/98 -	b
SW093	6/30/98 - 7/8/98	360
SW093	7/9/98 - 7/16/98	320
SW093	7/17/98 - 7/25/98	120
SW093	7/26/98 - 7/30/98	160
SW093	7/31/98 - 8/13/98	20
SW093	8/14/98 - 9/2/98	300
SW093	9/3/98 - 9/15/98	350
SW093	9/16/98 - 9/30/98	400

a Non-sufficient quantity

b Composite sample in progress

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Table 4-29. Hydrologic Water Quality Parameters and Major Ions, Water Year 1998 (July, August and September)

Location	Sample Dates	TSS mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Cl mg/l	F mg/l	SO4 mg/l	HCO3 mg/l
GS04	7/25/98	16	34.5	8.02	18.5	4.04	13	0.34	31	130
GS04	8/4/98	<5	48.1	10.7	28.8	2.06	16	0.4	34	170
GS05	8/31/98	30	16.3	4.33	7.37	5.2	15	0.19	6	52
GS06	7/30/98	210	18.5	4.75	9.28	6.81	19	0.14	7	58
SW134	8/26/98	43	26.9	6.42	14.9	1.3	9.5	0.33	38	76

Table 4-30. Sand/Sediment Split, Water Year 1998 (July, August, and September)

Sieve Analysis (%)								
LOCATION	SAMPLE DATE	0.75"	0.375"	#4 mesh	#10 mesh	#40 mesh	#200 mesh	<#200 mesh
GS04	7/25/98	<1	<1	<1	<1	<1	<1	100
GS04	8/4/98	<1	<1	<1	<1	<1	<1	100
GS05	8/31/98	<1	<1	<1	<1	<1	<1	100
GS06	7/30/98	<1	<1	<1	12	12	12	62
SW134	8/26/98	<1	<1	<1	<1	<1	<1	100

5. APPENDIX A: SPECIAL REPORTING

5.1 ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE 1996 PUBLIC RADIATION DOSE ASSESSMENT, REVISED

Introduction

A revised public radiation dose assessment was performed for calendar year (CY) 1996 to support the requirements of DOE Order 5400.5, "Radiation Protection of the Public and the Environment." This revised assessment is needed due to the discovery of additional radionuclide emissions in CY 1996 from decontamination activities at underground storage tanks near building 774 at the Rocky Flats Environmental Technology Site (RFETS). For additional information on these radionuclide emissions, see the addendum to the Radionuclide Air Emissions Annual Report for CY 1997.

DOE Order 5400.5 states that the radiation dose to the public will be assessed from exposures to radiation sources from routine activities at a DOE facility and from property released subsequent to remedial action at that facility. This public radiation dose will be compared with the annual radiation dose limit of 100 mrem from this Order to assure that the radiation dose limit is not exceeded. The member of the public that received the highest radiation dose from radiation sources at the RFETS is called the Maximally Exposed Individual (MEI). The radiation dose received by the MEI will be compared with the annual radiation dose limit of 100 mrem. For CY 1996, the revised MEI was located at Mower Lake. The radiation dose received by this MEI for CY 1996 was 0.55 mrem. This radiation dose is well within the annual radiation dose limit of 100 mrem.

Radiation Protection Standards For The Public

Standards for protection of the public from radiation sources are based on the concept of radiation dose. This concept provides a means for quantifying the biological effect or risk from all types of radiation on a common basis. Radiation dose is expressed in rem or mrem (1 rem = 1,000 mrem). Radiation protection standards are based on guidance from the National Council on Radiation Protection and Measurement (NCRP) and the International Commission on Radiological Protection (ICRP). These organizations are internationally recognized for their expertise in radiation protection principles. DOE Order 5400.5 prescribes an annual public radiation dose limit of 100 mrem which is based on guidance from the NCRP and ICRP.

Radiation Dose Assessment Methodology

In order to assess the radiation dose to a member of the public from radiation sources at RFETS, a number of steps need to be followed. These steps are:

1. The radiation sources at RFETS that release radioactive material to the environment need to be analyzed, and the releases from these sources need to be quantified,
2. The members of the public closest to the boundary of RFETS need to be located,
3. The exposure pathways (inhalation, ingestion, etc.) by which these members of the public may be exposed to the released radioactive material need to be defined, and
4. The radiation dose received by these members of the public need to be assessed.

DOE Order 5400.5 encourages the use of realistic, but conservative, approaches to radiation dose assessment. The radiation dose assessment performed in this report uses this approach.

Sources of Radioactive Material

The radioactive material released to the environment at RFETS includes isotopes of americium, plutonium, uranium and tritium. For CY 1996, these radioactive materials were released from RFETS through air emissions and through surface water emissions. There have also been past releases from RFETS that have deposited americium and plutonium on surface soils east of RFETS. These surface soils were investigated as Operable Unit #3 at RFETS. Emissions of radioactive material in air and water plus past depositions of radioactive material in surface soils will be used to assess the radiation dose to the public during CY 1996.

The radioactive material released in air from RFETS is quantified in the Radionuclide Air Emissions Annual Report for CY 1996 and also in the addendum to the Radionuclide Air Emissions Annual Report for CY 1997. Both of these reports were developed to comply with the requirements from the Environmental Protection Agency (EPA) in Title 40 of the Code of Federal Regulations (CFR), Part 61 and from the Colorado Air Quality Control Commission Regulations. All sources of radioactive material (Both point sources and area sources) at RFETS are assessed in these reports with their associated air emissions. Air emissions are then translated into air concentrations of radioactive material outside of the

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boundary of RFETS. Air concentrations of radioactive material from these reports are used to quantify the amount of radioactive material inhaled by members of the public and to quantify the amount of radioactive material deposited onto surface soils. These surface soil concentrations of radioactive material will be used to quantify the amount of radioactive material ingested in soil by a member of the public as well as to quantify external radiation exposure to a member of the public.

The radioactive material released in water from RFETS is quantified through routine surface water monitoring activities. In 1996, Ponds A-4 and B-5 released water off-site in a batch manner. Pond C-2 did not release any water off-site in 1996. The pond water was analyzed for radioactive material before each release from the plant. The volume of water was recorded for each release. Volume weighted average surface water concentrations of radioactive material are used to quantify the amount of radioactive material ingested by members of the public.

Due to past releases of radioactive material at RFETS, there are elevated levels of radioactive material in surface soils east of RFETS. The amount of radioactive material in surface soils is documented in the Final Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report for Operable Unit #3 (Offsite Areas). Surface soil samples taken to support the Operable Unit #3 Report will be used to quantify the amount of radioactive material near a member of the public. These surface soil concentrations of radioactive material will be used to quantify the amount of radioactive material ingested in soil, the amount of radioactive material inhaled due to soil resuspension as well as to quantify external radiation exposure to a member of the public.

Location of Members of the Public Surrounding RFETS

In order to compare the radiation dose to a member of the public with radiation dose limits, it is necessary to identify the MEI (Maximally Exposed Individual) member of the public. This member of the public will receive the highest radiation dose from radioactive material released from RFETS. The radiation dose received by the MEI member of the public will be used to compare with public radiation dose limits.

To identify the MEI member of the public, seven locations surrounding RFETS were investigated. The nearest member of the public was assessed in the north, northwest, southwest, south and east (3 locations) directions from RFETS. All of these locations are residents.

Exposure Pathway Analysis

The most significant exposure pathways for a resident will be assessed in this radiation dose assessment. The exposure pathways of 1) Inhalation of radioactive material in air, 2) Ingestion of radioactive material in surface soil, 3) External exposure from radioactive material in surface soil, and 4) Ingestion of surface water will be assessed in this radiation dose assessment. The ingestion of homegrown produce was not assessed due to the high dilution of radioactive material deposited on surface soil during tilling.

All of these exposure pathways though may not be applicable to each of the seven locations being examined and/or may not be significant to each of these seven locations at the boundary of RFETS. This is because surface water is preferentially released to the east of RFETS and because the surface soils east of RFETS contain elevated concentrations of radioactive material. Therefore, the ingestion of radioactive material in surface water will only be applicable to those locations east of RFETS. Also, the inhalation of resuspended radioactive material in surface soil, the ingestion of radioactive material in surface soil as well as the external exposure from radioactive material in surface soil will be most significant east of RFETS.

For the inhalation of radioactive material in air, ingestion of radioactive material in surface soil and external exposure from radioactive material in surface soil exposure pathways, the EPA's Reasonable Maximum Exposure (RME) exposure parameters for a resident will be used. Exposure parameters were taken from EPA's OSWER Directive 9285.6-03, "Human Health Evaluation Manual, Supplemental Guidance: 'Standard Default Exposure Factors'." The RME exposure parameters represent the maximum exposure reasonably expected by an individual.

For the ingestion of surface water exposure pathway, it is not reasonable to assume that a resident would use the surface water released from RFETS for household use. This is because the surface water is released intermittently from RFETS in both Walnut Creek and Woman Creek. Therefore this water is not a reliable water supply. In Walnut Creek, surface water is released to a waterway that is not used as a drinking water supply. Surface water released from the plant was diverted around Great Western Reservoir to Big Dry Creek and subsequently to the South Platte River. Big Dry Creek contributes less than 0.2 percent to the total flow in the South Platte River. There is no drinking water supply use of the South Platte River from the confluence of Big Dry Creek along the entire reach to the confluence of the North Platte River in Nebraska. In Woman Creek, there were no surface water discharges in CY 1996.

Due to these circumstances, it is not reasonable to assume that a resident would use the surface water released from RFETS for household use. It is reasonable to assume though that the residents near the eastern boundary of RFETS may come into contact with surface waters released from RFETS in a recreational capacity. It is therefore assumed that residents wade in surface waters periodically and incidentally ingest surface water at these times. Exposure parameters for this recreational exposure were taken from the open space exposure scenario defined in Appendix P, "Programmatic Preliminary Remediation Goals," of the Implementation Guidance Document within the Rocky Flats Cleanup Agreement (RFCA).

Radiation Dose Assessment

In order to develop the radiation dose to the MEI member of the public, the location of the MEI must be decided. From the addendum to the Radionuclide Air Emissions Annual Report For CY 1997, the individual receiving the highest radiation dose through the air inhalation pathway was located north of RFETS on McCaslin Boulevard. Since surface water is preferentially released to the east of RFETS and the surface soils east of RFETS contain elevated concentrations of radioactive material, the three locations east of RFETS were investigated along with the location north of RFETS to determine the MEI individual. After assessing the radiation dose to an individual at all four locations, the MEI individual for CY 1996 is located at Mower Lake.

To calculate radiation dose due to inhalation and ingestion, concentrations of radioactive material in air, water and soil are first multiplied by the amount of time the MEI is exposed to these media (i.e., 24 hrs/day, 350 days/yr, etc.) and then the intake rates (i.e., breathing rate, water ingestion rate, etc.) appropriate to the MEI individual. This product is the total amount of radioactive material inhaled and ingested by the MEI individual. The total amount of radioactive material inhaled and ingested is then multiplied by the radiation dose conversion factors found in Federal Guidance Report No. 11, Limiting Values of Radionuclide Intake and Air Concentrations and Dose Conversion Factors for Inhalation, Submersion and Ingestion, to calculate the radiation dose to the MEI due to inhalation and ingestion of radioactive material.

To calculate radiation dose due to external irradiation, concentrations of radioactive material in soil are multiplied by the external radiation dose conversion factors found in Federal Guidance Report No. 12, External Exposure to Radionuclides in Air, Water and Soil.

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The radiation dose received by the MEI individual is 0.55 mrem. This radiation dose is well within the radiation dose limit of 100 mrem in DOE Order 5400.5. The following table gives the breakdown of radiation dose by radionuclide and by exposure pathway for the MEI individual.

Table 5-1. Radiation Dosage by Radionuclide for 1996, Revised

Radionuclide	Soil Inhalation Radiation Dose (mrem)	Soil Ingestion Radiation Dose (mrem)	External Irradiation Radiation Dose (mrem)	Water Ingestion Radiation Dose (mrem)	Total Radiation Dose By Radionuclide (mrem)
Am-241	4.32E-02	5.84E-02	5.54E-03	1.10E-04	1.07E-01
Pu-239/240	1.17E-01	2.70E-01	1.29E-04	2.79E-04	3.87E-01
U-234	2.31E-02	3.12E-06	3.33E-08	7.68E-04	2.39E-02
U-235	1.41E-03	1.93E-07	2.06E-06	3.80E-05	1.45E-03
U-238	2.90E-02	3.93E-06	2.05E-08	8.15E-04	2.98E-02
H-3	2.87E-05	0.00E+00	0.00E+00	0.00E+00	2.87E-05
TOTAL	2.1E-01	3.3E-01	5.7E-03	2.0E-03	5.5E-01

Collective Dose

DOE Order 5400.5 requires the assessment of collective population radiation dose to a distance of 80 km (50 miles). Collective population dose is calculated as the average radiation dose to an individual in a specified area, multiplied by the number of individuals in that area. In assessing the revised 1996 collective population dose to the public from RFETS, the assessment was limited to airborne emissions of radioactive materials from the site as the major contributor to population dose.

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The collective dose assessment was performed using the computer model CAP88-PC. The population surrounding RFETS was based on 1994 data adjusted for regional growth. The collective dose was calculated to be 18.1 person-rem for CY 1996.